UNITED
NATIONS

A E

General Assembly

Economic and Social Council

Distr.
GENERAL

A/46/263
E/1991/88
19 June 1991
ENGLISH
ORIGINAL: ARABIC

GENERAL ASSEMBLY
Forty-sixth session
Item 12 of the preliminary list*
REPORT OF THE ECONOMIC AND SOCIAL COUNCIL

ECONOMIC AND SOCIAL COUNCIL
Second regular session of 1991
Item 5 of the provisional agenda**
PERMANENT SOVEREIGNTY OVER NATIONAL RESOURCES IN THE OCCUPIED PALESTINIAN AND OTHER ARAB TERRITORIES

Israeli land and water practices and policies in the occupied Palestinian and other Arab territories

Note by Secretary-General

1. The Economic and Social Council, in its resolutions 1989/86 of 26 July 1989 and 1990/53 of 24 July 1990, requested the Secretary-General to prepare a comprehensive report on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories and to submit the report to the General Assembly at its forty-sixth session through the Council.

2. At the request of the Secretary-General, the Economic and Social Commission for Western Asia has prepared a report on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories. The report is annexed to the present document.

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* A/46/50.

** E/1991/100.

ANNEX

Report prepared by the Economic and Social Commission for Western Asia on Israeli land and water policies and practices in the occupied Palestinian and other Arab territories

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INTRODUCTION

1. Since its occupation of the West Bank, the Gaza Strip and the Syrian Arab Golan (the occupied Palestinian and other Arab territories) in June 1967, Israel has enacted a series of laws, regulations and decrees that have resulted in the seizure of Arab land and property, as well as sources of water, including groundwater in the West Bank and the Gaza Strip and from the Jordan River.

2. As a result of those policies and practices pursued by the Israeli authorities regarding land and water in the occupied Palestinian and other Arab territories, the area of Arab land under irrigation has been reduced, while irrigated areas in the Israeli settlements have been increased. Economic and living conditions in the occupied territories have consequently continued to deteriorate.

I. LAND AND WATER RESOURCES AND USES THEREOF IN ISRAEL AND THE OCCUPIED PALESTINIAN AND OTHER ARAB TERRITORIES

A. Background

3. As a result of its occupation of Palestinian and other Arab territories in June 1967, Israel gained full military control of all the land and water resources of the West Bank and the Gaza Strip, in addition to the greater part of the Syrian Arab Golan. As a consequence, a total of 7,113 km^2 (West Bank: 5,573 km^2; Gaza Strip: 360 km^2; Syrian Arab Golan: 1,180 km^2) with a population of 1,510,000 according to the 1988 census (West Bank: 900,000; Gaza Strip: 600,000; Syrian Arab Golan: 10,000) fell under Israeli administrative control. Table 1 shows basic land and water indicators for Israel and the occupied Palestinian and other Arab territories.

4. As a result of the 1982 Israeli invasion, Israel gained complete control of the land and water resources of southern Lebanon, particularly in the lower Litani River basin.

5. Between the occupation of the West Bank and the Gaza Strip in 1967 and the end of 1989, the Israeli military authorities issued over 2,000 military orders and laws regarding the occupied Palestinian and other Arab territories, including those relevant to water. A series of measures was taken by which the laws in force in the West Bank and the Gaza Strip before the Israeli occupation were abrogated. Furthermore, restrictions were imposed on agricultural expansion and the use of water by the Palestinian Arab inhabitants.

6. Israel and the occupied Palestinian and other Arab territories are situated in the arid or semi-arid regions of the world and their water resources are limited. The 1979 Israeli Bear report gives the annual water supply in an average year, as shown in table 2.

Table 1. Basic land and water indicators for Israel and the occupied Palestinian and other Arab territories

(1 dunum = 1,000 m^2)

	West Bank	Gaza Strip	Israel
Total area (dunums)	5 573 000	360 000	20 000 000
Population (1988)	900 000	600 000	4 300 000
Area of land cultivated (dunums)	2 100 000	214 000	4 250 000
Area of land irrigated (dunums)	110 000	120 000	1 850 000
Percentage of total land cultivated	38	59	21
Percentage of total land irrigated	5	56	44
Annual water consumption for irrigation (million m^3)	95	80	1 320
Annual water consumption for households (million m^3)	27	21	325
Annual water consumption for industry (million m^3)	3	2	125
Total annual water consumption (million m^3)	125	103	1 770
Total per capita water consumption (m^3)	139	172	411
Per capita water consumption per household (m^3)	30	35	75
Per capita water consumption for industry (m^3)	3.3	3.3	29
Per capita water consumption for irrigation (m^3)	106	133	307

Source: Israeli land and water policies and practices in the occupied Palestinian and Arab territories, unpublished study in Arabic (Economic and Social Commission for Western Asia, Baghdad, 1990), p. 8.

Table 2. Long-term potential mean yield of conventional water sources in Israel

(Millions of cubic metres per year)

Water source	Fresh	Saline	Total
Sea of Galilee (Kinneret) Basin (surface and groundwater)	570	20	590
Groundwater			
(a) wells (not including Galilee Basin)	699	125	824
(b) springs	75	97	172
Runoff water	135		135
Reclaimed waste water	325		325
Total	1 804	242	2 046

Source: K. K. Framji, B. D. Garg and S. D. L. Luthra, eds., Irrigation and Drainage in the World: a Global Review, 3rd edition (New Delhi, International Commission on Irrigation and Drainage, 1982), vol. II, p. 657.

7. The total available annual water resources are thus estimated at 2,046 million m^3, which represents approximately 20 per cent of the annual rainfall.

8. The annual water consumption in Israel was published by the Water Commission of the Israeli Ministry of Agriculture in February 1981, as shown in table 3.

9. The Water Commission estimated that the average yearly increase in water consumption was approximately 6 per cent and that the total annual water supply in Israel and the occupied Palestinian and other Arab territories as a whole would reach in 1990 a maximum of 2,070 million m^3. On the basis of population projections, and assuming constant per capita water consumption, the projected water demand by the year 2000 for Israel and the occupied Palestinian and other Arab territories would be faced with a deficit of 828 million m^3 of water annually. 1/

Table 3. Average annual water consumption in Israel

(Millions of cubic metres)

Consumer	Water quality	Annual water consumption 1979	 1990 (estimated)
Agriculture	Sweet	1 210	960
	Brackish (treated)	120	155
	Waste water (treated)	60	230
Subtotal		1 390	1 345
Domestic and industrial	Sweet	300	540
Losses		40	40
Total		1 730	1 925

Source: K. K. Framji, B. D. Garg and S. D. L. Luthra, eds., Irrigation and Drainage in the World: Global Review, 3rd edition (New Delhi, International Commission on Irrigation and Drainage, 1982), vol. II, p. 662.

B. Land and land use in the occupied Palestinian and other Arab territories before the 1967 Israeli occupation

10. The terrain and the prevailing agricultural patterns in the West Bank, the Gaza Strip and the Syrian Arab Golan are briefly described below.

1. The West Bank

11. The Ghor area is lowland terrain ranging from about 240 m below sea level near Ghor Toubas-Bardala in the north to about 392 m below sea level at Ain al-Fashkha south of Jericho. The lowland area is locally known as the Ghor and comprises the western Jordan Valley. The area contains very fertile land and has substantial groundwater potential in the Ghor as well as the adjacent western escarpment flanking the Jordan Valley. In the decades preceding the Israeli occupation, Palestinian farmers were able to develop and fully reclaim this land to provide local and external markets with vegetables, citrus, bananas and other produce. It was one of the mainstays of agricultural growth in the West Bank.

12. The uplands include the regions of Hebron, Jerusalem and Nablus. Agriculture underwent rapid development in this area during the decades preceding Israeli occupation. Both rainfed and irrigated orchards of various types of fruit trees were cultivated, and grapevines covered large areas in this region. Olive trees were also grown and the region became famous for its olive oil, grapes and other fruit trees. Production met local market needs and was also exported, especially to the Arab Gulf countries. Grain crops such as wheat, barley and maize were also grown.

13. The semi-coastal region is situated in the north-west of the West Bank around the towns of Jenin and Tulkarm and surrounding villages. In this area, olive, citrus and other fruit trees were cultivated, and crops were grown, using both rainfed agriculture and groundwater irrigation schemes.

14. The total area of the West Bank is approximately 5.5 million dunums. According to the results of the 1965 agricultural census, agricultural holdings in the West Bank were typically small-scale: approximately 36 per cent were under 10 dunums and 70 per cent were under 50 dunums; these holdings consisted of small and usually dispersed parcels. Taking into consideration demographic developments in the area, it is clear that there is an increasing tendency for the size of these holdings to shrink further with time.

15. Following the establishment of Israel, Palestinians from the coastal region were forced to migrate towards the West Bank and East Bank of the Jordan. As a result unemployment rose and both banks of the Jordan faced a difficult economic situation in the early 1950s: 50 per cent of the labour force there worked in agriculture, which suffered from underemployment. However, strenuous development efforts enabled agriculture to double its contribution to the gross domestic product (GDP) from 14.2 million Jordanian dinars (JD) in 1954 to JD 27.7 million in 1966. According to the population and housing census of 1961, 35 per cent of the labour force in the West Bank worked in agriculture.

16. The Jordanian 1964-1970 Development Programme, which it was not possible to implement fully owing to the 1967 Israeli occupation of the West Bank, was aimed at increasing the area of agricultural land in the West Bank in order to raise the level of income from agriculture and improve the standard of living of farmers by increasing agricultural production through both horizontal and vertical expansion.

17. Statistics available indicate that 30 per cent of the agricultural land in the West Bank before 1967 depended on irrigation. The intention was to increase the area of land under irrigation to 40 per cent by the end of the Development Programme in 1970. The Programme also aimed at increasing the area of land planted with fruit trees and, in particular, at doubling the area planted with olives, almonds, grapes and other fruit trees, as well as various types of vegetables. In order to achieve those objectives, the Jordanian Government concentrated its efforts on providing easy-term loans to farmers. A special agricultural credit institution was established that offered both

West Bank and East Bank farmers medium- and long-term loans in order to enable them to redouble their efforts to exploit more land and to help them to expand their use of agricultural machinery, irrigation and fertilizers. Agricultural support services were also set up and agricultural research, extension and other services were expanded. Those supporting services provided by the Jordanian Government were needed because investment in agriculture was mainly from the private sector. The Government's responsibility was concentrated on providing those services which would enable the agricultural sector to make a growing contribution to food security and to increase its share of the GDP.

18. Government land in the West Bank was used for grazing. At that time, Jordan was self-sufficient in red meat and other livestock produce. Consequently, the dairy and leather products sectors flourished in the West bank, especially in the Hebron area and the eastern uplands.

2. Gaza Strip

19. The Gaza Strip is approximately 360 km^2 in area and is primarily privately owned. Agricultural holdings, as in the West Bank, are typically small-scale. The reclamation of land for agriculture had been proceeding at a growing pace in the decades leading to the June 1967 war. The private sector played an important and beneficial role in the development and exploitation of agricultural land during that period. The Gaza Strip was famous for its citrus orchards and dried fruit. Vegetables and other fruit produce were exported to Egypt and other countries, especially the Gulf Cooperation Council (GCC) countries. In the wake of the events of 1948, the Gaza Strip suffered from increased numbers of immigrants from Palestinian towns and villages that had become subject to control by Israel. Refugees were housed in camps throughout the Gaza Strip, which meant that the potential for horizontal agricultural expansion was limited. That led to a trend towards vertical expansion by encouraging farmers to use modern agricultural methods and chemical fertilizers in order to increase their production. Agriculture made considerable progress, bringing economic progress and a rising standard of living to local inhabitants in the years before the 1967 Israeli occupation.

3. Syrian Arab Golan

20. The Syrian Arab Golan comprises the upland plateau flanking the Haula Plain and the Sea of Galilee. In addition to Mount Hermon (2,814 m), with its substantial water resources, there are two main mountain ranges in the Golan: the first extends from the north-west to south-east towards the town of Quneitra and the second extends south-east from south of Quneitra to the village of El-Rafid.

21. The Golan has a large number of deep, abrupt valleys carved out by abundant winter rains and floods. They run west-south-west, carrying natural tributaries to the eastern banks of the Sea of Galilee and the right bank of the Yarmuk River.

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22. The occupied Syrian Arab Golan is a fertile agricultural area and is well known for the cultivation of fruit, especially apples, almonds and grapes, in addition to vegetables and other crops. Agriculture and animal husbandry were the main sources of livelihood of the local inhabitants before the Israeli occupation of their land in June 1967. In the Syrian Arab Golan, agricultural land is owned mainly by small farmers whose holdings are small and dispersed.

C. Water resources in the occupied Palestinian and other Arab territories

23. In Israel and the occupied Palestinian and other Arab territories, rainfall decreases from north to south and from west to east with averages ranging from 700 mm per year in the region of Safad in the north to 60 mm per year near the Gulf of Aqaba in the south and 600 mm per year at Nahariya in the west to 150 mm per year near the Dead Sea. Rainfall is relatively abundant in the West Bank, ranging in an average year from 650 mm in the north to 300 mm in the south.

24. The average annual rainwater supply in the West Bank is approximately 2,800 million m^3 and the average annual rainwater supply in Israel and the occupied Palestinian and other Arab territories does not exceed 10,000 million m^3. That means that the rainwater resources in the West Bank alone represent over 25 per cent of the total rainwater resources. It is estimated that this annual rainfall is distributed as follows:

2,800 million m^3 = 1,900 million m^3 lost through evaporation
+ 625 million m^3 to groundwater basins
+ 225 million m^3 to rivers (Jordan, 'Auja)
+ 50 million m^3 as runoff.

25. In view of the extreme importance of groundwater basins in the West Bank and the Gaza Strip, the hydrogeological characteristics of these basins are given in tables 4 to 6.

26. In the Gaza Strip, a bulletin published by the Israeli military governor in 1980 indicated that there were 1,775 artesian wells, from which approximately 120 million m^3 of water was pumped annually. Annual rainfall in the Gaza Strip is estimated at approximately 300 to 400 mm, which serves to recharge the aquifers with approximately 70 to 80 million m^3 of water, in addition to groundwater that flows into the Gaza Strip from the east. There is thus an estimated annual shortfall in the groundwater supply in the Gaza Strip of approximately 15 to 20 million m^3. This depletion of groundwater has been one of the main reasons for intrusion by sea water into the aquifers and a rise in chlorine content to dangerous levels. Groundwater salinity in the Gaza Strip shows a constant deterioration year after year.

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Table 4. North-eastern groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Nablus/Jenin	Upper and Lower Cenomanian	92-114	80-95	300
Gilboa/Ta'nakh	Eocene	35	40-50	

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 59.

Table 5. Western groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Auja/Timsah	Upper and Lower Cenomanian	380-400	350-370	1 300
Hebron/ Beer Sheba	Upper and Lower Cenomanian	20-21	16.6-21	300

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 57.

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Table 6. South-eastern groundwater basin

Groundwater basin	Aquifer	Total pumped and/or spring discharge (million m^3 per year)	Recharge	Area (km^2)
Bardala	Upper and Lower Cenomanian	9-11	3-6	90
Buqei'ah/ El-Malih	Eocene and Upper and Lower Cenomanian	2	2-3	66
Fare'a	Neogene and Pleistocene	9-10	9-15	145
Fasayel/ Auja	Upper and Lower Cenomanian	12.5-15	24-40	610
Ramallah/ Jerusalem	Upper and Lower Cenomanian	25	50-70	610
Desert south of Jerusalem	Upper and Lower Cenomanian	6.2-6.7	35-40	590

Source: Economic and Social Commission for Western Asia; Arab Organization for Agricultural Development, Food Security in the West Bank and Gaza Strip (E/ESCWA/AGR/85/4) (Baghdad, United Nations; League of Arab States, 1985), p. 60.

27. Average annual rainfall on the Syrian Arab Golan is estimated at approximately 1,500 million m^3, most of which seeps into the aquifers to form the sources of the northern tributaries of the Jordan River. Before 1967, the Arab inhabitants numbered approximately 100,000 and their annual water consumption was about 12.5 million m^3. Most of those inhabitants left during the 1967 war, leaving only some 10,000 Syrian Arabs in the occupied Golan in 1988. 2/

28. Hydrologically, the Syrian Arab Golan is divided into two main watersheds: one has an area of 950 km^2 and empties into the Sea of Galilee; the other has an area of 200 km^2 and flows into the Raqqad Valley. However, the Golan lacks sources of water suitable for use on a large scale. Numerous small springs are found scattered throughout the area, but cannot be used for water projects. A number of wells have been drilled in the north and centre of the Golan; however, their yield has been low. Available water resources do not exceed 20 million m^3 annually. 2/ For that reason, Israel pumps the greater part of the current water needs of the Israeli settlements for domestic purposes and irrigation from the Sea of Galilee. The Kursi project was established on the East Bank of the Sea of Galilee and currently pumps approximately 13 million m^3 of water per year to an altitude of over 600 m. 3/

II. ISRAELI POLICIES AND PRACTICES REGARDING LAND AND SETTLEMENT

A. Israeli policies and practices

29. Israeli land and water policies in the occupied Palestinian and other Arab territories formed an integral part of the strategy of settlement as the key mechanism for Israeli control of those territories.

30. Two distinct phases of Israeli settlement policies can be identified. The first, from 1968, was concurrent with the coalition (Labour party) Government. The second, from 1978 to the present, coincides with the Likud administration (1978-1984) and the Government of national unity (1984-present). 4/

31. Israeli settlement policies are aimed at bolstering the Israeli economy and creating an integrated economic, agricultural and industrial base. Agricultural settlements were established on the most fertile land and on suitable sites (type of soil, abundance of groundwater, etc.).

32. Regarding industrial activities of the settlements Yigal Allon stated:

> "The idea behind the industrially based settlements on the Golan and in parts of Judea and Samarea is that it is not enough to establish small settlements based on agriculture in strategically vital zones. If we are to have a large population in these areas, industrially based townlets are needed". 5/

33. The types of investment directed to settlements, as shown in table 7, reflect the integrated economic and social activities.

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Table 7. Investment in settlements, 1968-1987

	Units			Investment (millions of United States dollars)			
	1982	1984	1986	1982	1984	1986	Remarks
Housing: apartments	12 400	16 900	17 950	690	929	987 40.7*	Including temporary, under construction
Industrial production	1 260	1 610	2 362	328	418	614 25.4*	Thousand m^2
Agriculture	55	55	55	55	75	95 3.9*	Thousand dunums
Water	..	..	..	122	142	162 6.7*	Main and local grids
Roads	200	-	288	75	90	101 4.2*	Km paved
Telecommunication	2 400	9 000	15 850	15	23	39 1.6*	Subscribers
Electricity	..	..	..	15	25	30 1.3*	Estimate, excluding East Jerusalem Electric Corporation
Education	..	336	432	-	40	51 2.1*	Classrooms
Health clinics (ambulances)	..	71	98/61	..	4	7 0.3*	Clinics/ ambulances
Unspecified	..	..	..	250	325	335 13.8*	WZO, transport community services, etc.
Total				1 550	2 071	2 421 100	

Source: Meron Ben Venisti and Shalomo Khayat, The West Bank and Gaza Atlas (Jerusalem: West Bank Data project, The Jerusalem Post, 1988), p. 32.

* Percentage of total 1986 investment.

34. The establishment of integrated Jewish communities in the occupied Palestinian and other Arab territories does not take into account the interests of the Arab population. According to the West Bank Data Base project, the average annual increase in the number of settlers in the first decade was 770 (peak 2,300), while in the second decade the average annual increase was 5,960 (peak 16,646). 4/ According to a study prepared by the United Nations Conference on Trade and Development (UNCTAD), in 1987, 1 per cent of the 12,900 new immigrants to Israel settled in the West Bank (including East Jerusalem) or the Gaza Strip. That proportion was expected to have reached 5 per cent for 1990 (TD/B/1266, p. 7).

35. Israeli authorities continue to provide material incentives to encourage settlement in the West Bank and Gaza Strip.

> "These include disproportionately high public investment in settlements compared to similar-size Israeli localities, stronger investment incentives accorded to industrial zones in the settlements, higher housing subsidies and lower land value assessments for home building schemes in the settlements, income and other tax relief granted to settlers, the higher regular (maintenance) public expenditures on services in settlements and higher government per capita budget grants to settlements than to localities in Israel itself" (ibid., p. 19).

36. Concern has been expressed at the growing number of settlements in all the territories occupied by Israel since 1967, including Jerusalem, particularly in the light of the influx of immigrants to Israel in recent years. The establishment of such settlements stands in violation of the provisions of both the Fourth Geneva Convention and Security Council resolution 465 (1980), by which the Council determined that all measures taken by Israel to change the physical character, demographic composition, institutional structure or status of the occupied Arab territories had no legal validity.

37. Since its occupation of the West Bank, the Gaza Strip and the Syrian Arab Golan in June 1967, Israel has used the following laws and regulations to seize Arab land:

(a) The Law of Expropriation of Land in the Public Interest, enacted by the British mandatory authorities in Palestine in 1943;

(b) The Emergency Defence Law, enacted by the British mandatory authorities in Palestine in 1945;

(c) The Emergency Law for the Utilization of Unproductive Land, enacted in 1948 by Israel. This law was drawn up to enable the Israeli Minister of Agriculture to exercise his power to confiscate land if he was convinced that the owner did not intend to use it for agricultural purposes. It has also been used in the occupied territories from 1967 until the present;

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(d) The Law of Confiscation of Property and Real Estate, enacted by Israel in 1949. By virtue of this law, the Israeli authorities have the right to confiscate any property or real estate which they believe to be vital to Israeli national security. This law has been used extensively since the Israeli occupation of the West Bank and Gaza Strip, as well as the Syrian Arab Golan, to confiscate Arab land and sources of water;

(e) The Absentee Property Law, decreed by the Knesset on 14 March 1950 in replacement of the Emergency Law issued on 19 December 1949 concerning the seizure of absentee property. Since it was issued, this law has been used to seize the property of persons the Israeli occupation authorities consider to be absent or resident abroad. By 1976 Israeli land experts completed the survey of absentee and government properties and took possession of these categories of land by virtue of orders No. 58 and 59. 6/

38. On the basis of these laws and regulations, between June 1967 and the end of 1990 the following land areas were confiscated:

(a) A total of 2,895,642 dunums in the occupied West Bank, representing 52.6 per cent of the total land area of the West Bank; 7/

(b) A total of 153,475 dunums in the Gaza Strip, representing 42.3 per cent of the total land area of the Gaza Strip;

(c) 69.4 per cent of the total land area of the Syrian Arab Golan.

39. The confiscation of land has been the first step in the establishment of Israeli settlements in the occupied territories, using an integrated range of practices and measures, which may be summarized as follows:

(a) Preparing the necessary plans as a preliminary step to confiscating land from Arab farmers;

(b) Sending survey teams to determine the location and area of land intended for confiscation;

(c) Issuing the confiscation order;

(d) Sending official notification to local inhabitants and land owners that their land has been confiscated;

(e) Sending an order to inhabitants of the area concerned forbidding them to trespass on the confiscated land, and declaring it off limits for security reasons;

(f) Fencing off confiscated land with barbed wire;

(g) The Israeli army, in collaboration with Israeli settlers in the area, prevents Arab farmers from entering their confiscated land and from exploiting it in any way, whether by sowing crops, picking fruit or grazing animals;

(h) Advising the relevant authorities in Israel to implement the settlement plan on the confiscated land, or to establish a new settlement through the following arrangements and facilities:

(i) Machines and equipment are sent in to lay and pave roads across the confiscated land and to uproot fruit trees there;

(ii) Construction work is begun by Israeli contractors according to the plans for the intended settlement;

(iii) The executing authority endeavours to market the new housing units in the new settlement to Israelis at prices lower than those in Israeli towns and villages;

(iv) Settlers in the new settlement are usually armed.

40. Israeli settlements cover large areas of the Syrian Arab Golan and the Gaza Strip and are spread throughout all parts of the West Bank in the form of clusters of settlements surrounding Arab towns and villages. These settlements are linked by a network of highways to each other and to Israeli population centres.

41. In connection with this plan, the Israeli authorities are building a network of roads in order to develop their settlement plan in the West Bank. Among the main road projects being executed are the following:

(a) Route 50, approximately 55.5 km long: it has been decided that this road shall cut across the West Bank from north to south and from east to west dividing it into four quarters. The construction of this road will require some 8,000 dunums of Palestinian land;

(b) Route 60, which is to link Jerusalem with the settlement of Gush Etzion north-west of Hebron: this road will traverse vineyards and fruit orchards in the region south of Jerusalem and pass through a number of rural population centres in that region. Large areas of land have been expropriated in order to build this road.

42. Furthermore, other roads have been built as part of the Israeli settlement plan, such as the settlement ring road around the Arab town of Qalqilya in the north-west of the West Bank.

B. Economic and social consequences

43. The Israeli settlement policies and practices have had serious consequences on the economic and social conditions of the Palestinian and Arab people under occupation and on their potential for development.

44. A study prepared by UNCTAD on recent economic developments in the occupied Palestinian territory (TD/B/1142) indicated that the policy,

practices and measures of the Israeli occupation of the West Bank and the Gaza Strip had brought about radical changes in the structure of their economy, which had adversely affected economic growth and development. Agriculture remained the backbone of development in the occupied Arab territories, despite its declining contribution to GDP. That study demonstrated clearly that the total cultivated area had decreased from 36 per cent in 1966 to 27 per cent in 1984 of the total land area of the occupied West Bank, and in the occupied Gaza Strip from 55 per cent of total area in 1966 to 28 per cent in 1985.

45. Confiscation of land had adversely affected agricultural production and income in the West Bank and the Gaza Strip; income from agriculture declined from 1,505 million shekels in 1978 to 1,488 million shekels in 1984 in constant 1980 prices. As a result, according to another study of UNCTAD (UNCTAD/ST/SEU/4), the share of agriculture in GDP declined in constant prices from 32 per cent in 1978 to 28 per cent in 1984.

46. According to the same study, income from agriculture in the West Bank declined from $US 237 million in 1981 to $US 204 million in 1985. In the Gaza Strip it declined from $US 66 million in 1981 to $US 61 million in 1985, in spite of the fact that farmers were making increasing use of modern techniques in order to improve agricultural production in those areas.

47. As a result of the negative impact of the confiscation of agricultural land in the West Bank and the Gaza Strip, employment in agriculture fell from 38.7 per cent of the total workforce in 1970 to 24.4 per cent in 1985.

48. According to the report of the International Labour Organisation (ILO) on the situation of workers of the occupied Arab territories, submitted to the International Labour Conference at its 77th session, in 1990, "Endogenous development efforts are frequently frustrated or undone for administrative or security reasons". 8/ While evaluating Israeli policies and practices on the agricultural sector, the impact of the report highlighted the following points:

(a) "Agriculture remains the backbone of the economy but performance over the decade has been disappointing for lack of land, water and markets."; 9/

(b) Despite increased productivity as a result of the introduction of new technologies in agriculture, the new corresponding marketing opportunities were lacking; 10/

(c) "Agricultural employment in [the occupied] territories dropped from almost 60,000 workers in 1970 to 38,500 workers in 1987." The share of agricultural employment also dropped from 40 per cent to around 25 per cent. "In other words, thousands of workers left because they or their employers had lost their land or could not expand for lack of water; or because they could not compete in the home market with subsidized imports from Israel; or because they found barriers to buying farm inputs or to selling their products abroad". 10/

49. The reduction in the number of job opportunities and the spread of unemployment have been among the adverse consequences of the confiscation of agricultural land in the occupied Palestinian and other Arab territories, and have led to an increase in the numbers of workers from the occupied territories emigrating to Jordan and the GCC countries in search of a source of livelihood. A report published by the Arab Labour Organization in 1982 indicated that between 1967 and 1981, 140,000 workers had emigrated to those countries in search of work.

50. Mention should also be made of the uprooting of fruit trees by the Israeli authorities from the land of Arab farmers in the occupied territories. The Israeli newspaper _Ha'aretz_ (29 March 1989) noted that the Israeli authorities had uprooted 23,400 trees in the occupied territories during the first year of the _intifadah_.

51. A survey of the fruit trees uprooted from Arab farmers' land in the occupied territories was published in the 1989 annual report of the Jordanian Ministry of Labour, as shown in table 8.

Table 8. Destruction of trees and crops, 1989

Month	Olive trees uprooted	Citrus trees uprooted	Other fruit trees uprooted	Number of Arab towns and villages affected
January	2 285	210	90	14
February	925	105	200	10
March	1 417	-	330	9
April	3 337	100	7 000	16
May	4 110	2400 dunums of crops ploughed under.	12 dunums of grapes.	22
June	847	50 dunums of crops ploughed under.	550 dunums sprayed with chemical substances.	10
July	120	300	3	8
August	2 033	112	4 dunums ploughed under.	12
September	621	380	430	12
October	177	60	2 620	14
November	251	30	-	5
December	805	-	-	6

Source: Compiled from Government of Jordan, Ministry of Labour, Research Department, The impact of Israeli policies and practices on the conditions of Arab workers in the occupied Arab territories (published in Arabic), Annual report 1989 (Amman, January 1990).

52. Accordingly, the number of fruit trees uprooted in 1989 from Arab farms through actions by the occupation authorities connected with the confiscation of Arab land was no less than 30,000, of which 16,928 were olive trees. The number of towns and villages affected by these actions in the same year was 138.

53. Israeli policies and practices concerning land and settlement in the Syrian Arab Golan had the following consequences:

(a) A constant increase in the population of Israeli settlers in the Golan. The non-Israeli population increased by 13.2 per cent during the period from June 1983 to December 1988, while the Israeli population increased by 41 per cent during the same period; 11/

(b) The sharing with the Arab population and exploitation of the limited agricultural and water resources of the Golan by the Israeli settlers has aggravated the difficulties facing the Arab economy, which relies mainly on agricultural activities and resources (fertile soil, pasture and water resources). The ILO report states the following: "In the view of the Arab inhabitants of the Golan these difficulties are due to the state of occupation, aggravated by the annexation and the presence of the settlers"; 12/

(c) The marketing of apples, which constitute the only exportable product, has been subjected to certain restrictions and competition from the Israeli settlements; 13/

(d) The amount of agricultural land owned by the Arab population has been reduced. According to the ILO report, "Druse spokesmen also told the Director-General's representatives that the village of Mas'ada had a total area of 3,000 dunums of fertile land, but that only one third, 1,000 dunums, had been left to the Arab villagers". 14/

III. ISRAELI POLICIES AND PRACTICES REGARDING WATER

A. Israeli policies and practices

54. The Israeli military commander issued Order No. 92 on 15 August 1967 conferring what were called Mandatory Powers in respect of Water Regulations (translated from Arabic). This order was followed by numerous others all aimed at making basic modifications to the water laws and regulations in force on the eve of the June 1967 war in the West Bank, the Gaza Strip and the Syrian Arab Golan. One of the orders issued at that time, Order No. 158, enabled the Israeli occupation authorities to place the following restrictions on water resources:

(a) Water installations could not be built, assembled, owned or operated without a permit from the Israeli military governor;

(b) Applications should be submitted to the military Governor for permits to exploit groundwater or to execute any irrigation project, and the military governor had full power to grant or withhold permits without giving any reason in case of a refusal. 15/

55. By virtue of that order, permits were given to Israeli settlers to drill deep artesian wells close to shallower Arab wells, which thus dried up, harming crops, since the water had been drawn off to the Israeli wells.

56. A series of military orders has been issued by the Israeli military Governors in the occupied West Bank, the Gaza Strip and the Syrian Arab Golan; of those concerning water, the most important are the following:

(a) Order No. 92 of 15 August 1967 on water resources and water use in the occupied West Bank;

(b) Order No. 158 of 30 October 1967 amending the law on supervision of water in the West Bank;

(c) Order No. 498 of 4 November 1974 on water in the Gaza Strip.

57. All of those military orders have stipulated rules and regulations regarding water and water transfer, extraction, consumption, sale and distribution, the control of water use, water sharing and rationing, consumption of water, the construction of water installations, the drilling of wells, the granting of permits and all matters regarding water resources, whether groundwater or surface water, including springs, ponds, streams and rivers, as well as the setting of prices and quantities allowable for use by indigenous Arab inhabitants and farmers in the occupied Palestinian and other Arab territories. At the same time, these orders have made it easier for the Israeli authorities and settlers to seize and utilize water in the occupied territories. 16/

58. As a result of the foregoing, the Israeli authorities have gained control over water resources in the West Bank, the Gaza Strip and the Syrian Arab Golan. Other measures that have been taken include the following:

(a) Since its occupation of the Golan, Israel has established over 20 settlements, in addition to several industries and research centres. In accordance with the Jewish Agency Plan, each settlement is given 4,500 dunums of agricultural land, of which 2,500 dunums are used for grain crops under irrigation, 500 dunums for trees and 1,500 dunums for various other crops. Israel estimates that the water needs of its settlements in the Golan, according to their plans, will reach approximately 46 million m^3 per year, distributed as follows: 17/ (i) 8.7 million m^3 per year for settlements in the north of the Golan; (ii) 6.0 million m^3 per year for settlements in the centre of the Golan; and (iii) 31.6 million m^3 per year for settlements in the south of the Golan. The expected sources of water are: (i) 16 million m^3 per year from the Sea of Galilee; (ii) 11 million m^3 per year from the Hemmah springs and from the River Jordan;

(iii) 10 million m^3 per year from wells and springs in the Golan Heights; and (iv) 9 million m^3 per year from the construction of small dams to collect runoff;

(b) The Israeli company Mekorot has been given responsibility for all drilling operations for artesian wells throughout the occupied Arab territories. In Golan, Mekorot has a monopoly whereby every inhabitant must ask Mekorot for permission to collect rainwater. The Arab inhabitants of the Golan have been forced to demolish some of their own reservoirs and the Israeli army has dynamited a number of others. 18/ At present, only three or four reservoirs are authorized out of approximately 400 that had been built after the inhabitants adopted the system of collecting and using rainwater through reservoirs;

(c) The Israeli Water Board has been given responsibility for all operations regarding water distribution in the occupied Palestinian and other Arab territories and it has been allowed to install water metres in the artesian wells owned by Arab farmers in order to control the quantities of water extracted;

(d) In accordance with the military orders and administrative measures regarding water referred to above, the Israeli authorities have imposed tight restrictions on water use in the West Bank, the Gaza Strip and the Golan, where Arab farmers are prohibited from drilling artesian wells to irrigate the land they own. Permits are sometimes granted to drill wells to depths not exceeding 60 metres and for domestic purposes only. Israelis in the settlements are allowed to drill to depths of up to 500 metres;

(e) Owing to the sealing off of many agricultural areas as closed security areas, several hundred water pumps owned by Arab farmers, which were used to pump water from the Jordan River to irrigate their farms in the Ghor region of the West Bank, have been destroyed. Irrigation canals which supplied Arab farms in the region of El-Jiftlik with water have also been damaged. That has had an adverse effect on the agriculture and the economic and social life of that region;

(f) Citrus trees have been uprooted and Arab farmers have been prevented from planting new citrus trees, both in the Ghor region of the West Bank and in the Gaza Strip. In the Golan Arab farmers have also been prevented from planting apple and other fruit trees;

(g) Ram Lake, the largest body of water in the Golan, has been seized by the Israeli authorities. As a result, villages in the Golan have suffered a critical shortfall in drinking and irrigation water, while the water of Ram Lake has been diverted to Israeli settlements to satisfy the needs of the settlers and their agricultural and industrial projects in the area.

B. Economic and social consequences

59. The consequences of Israeli policies and practices regarding water may be described as follows:

(a) A state of conflict and competition over land and water resources has arisen and continues to prevail. That has had an adverse impact on the living conditions of Palestinians. The Israeli settlements in Jordan valley, for example, are in direct competition with the Arab villages for the limited resources of the West Bank; 19/

(b) The usable groundwater reserves in the West Bank are estimated at approximately 600 million m^3 per year. The Israeli occupation authorities are currently pumping approximately 500 million m^3 per year, leaving only 100 million m^3 per year for use by the West Bank, or 16.6 per cent of the water available in the West Bank;

(c) The deep wells drilled by the Israeli authorities in the occupied Palestinian and other Arab territories has affected the level and quantity of water in Arab wells, resulting in a reduction of their productive capacity and the drying up of some of those wells and thus the drying up of agricultural land that depended on those wells for irrigation water;

(d) Overexploitation of groundwater in the Gaza Strip and the great increase in water use by settlers in Israeli settlements has resulted in increased salinity through seawater intrusion. Approximately 50 per cent of the wells in the Gaza Strip have become unfit for human use and most of them are unfit for irrigation due to the high salinity levels;

(e) As in the West Bank and the Gaza Strip, the continued arbitrary practices of the Israeli occupation authorities aimed at confiscating land and gaining control of water resources in the occupied Syrian Arab Golan have reduced the area under cultivation, curtailed local development potential and lowered the local level of income from work in agriculture.

Notes

1/ Al-Mostakbal Study Centre, From the waters of the (West) Bank to the Yarmuk dam: the Danger Triangle, Al-Mostakbal (Arabic weekly magazine published in Paris), No. 545, 1 August 1987, p. 32.

2/ See International Labour Office (ILO), Report of the Director-General: Appendices (vol. 2), Appendix II: "Report on the situation of workers in the occupied Arab territories" (Geneva, 1990).

3/ Mounir Ashlaq, Water and water use in Palestine, in Economic and Social Commission for Western Asia, Proceedings of the Ad Hoc Expert Group meeting on Water Security in the ESCWA region, Damascus, 13-16 November 1989 (E/ESCWA/NR/1990/3) (Baghdad, 1990), p. 318.

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Notes (continued)

4/ Meron Benvenisti and Shlomo Khayat, The West Bank and Gaza Atlas (Jerusalem: West Bank Data Base project, The Jerusalem Post, 1988), p. 32.

5/ William Wilson Harris, Taking Root: Israeli settlement in the West Bank, the Golan and Gaza Sinai, 1967-1980 (Research Studies Press, 1980), p. 184.

6/ Meron Benvenisti, The West Bank Data project: A survey of Israel's Policies (Washington, D.C., American Enterprise Institute - Studies in foreign policy, 1984), p. 32.

7/ Government of Jordan, Ministry of Labour, Research Department, The impact of Israeli policies and practices on the conditions of Arab workers in the occupied Arab territories (published in Arabic), Annual report 1990 (Amman, January 1991), pp. 107-113.

8/ ILO, op. cit., para. 17.

9/ Ibid., para. 21.

10/ Ibid., para. 41.

11/ Ibid., para. 109.

12/ Ibid., para. 110.

13/ Ibid., para. 113.

14/ Ibid., para. 114.

15/ Department of the Affairs of the Occupied Homeland, Israeli designs on West Bank water (published in Arabic), Study No. 1 (Amman, Ibn Rushd Publishers and Distributors, 1987), pp. 15-16.

16/ Ibid., pp. 16-31.

17/ Adel Abdel-Salam, "Water in Palestine", in Palestine Encyclopedia, Part Two, vol. 1, Geographic studies (Beirut, 1990), p. 258 (in Arabic).

18/ ILO, op. cit., para. 111.

19/ David Kahan, Agriculture and water in the West Bank and Gaza (Jerusalem, The West Bank Data Base project, 1983), pp. 165-166.

UNITED
NATIONS

A

General Assembly

Distr.
GENERAL

A/46/264
18 June 1991

ORIGINAL: ENGLISH

Forty-sixth session
Agenda items 31, 35, 37, 43, 79, 80,
82 and 97 of the preliminary list*

THE SITUATION IN CENTRAL AMERICA: THREATS TO INTERNATIONAL PEACE AND SECURITY AND PEACE INITIATIVES

THE SITUATION IN THE MIDDLE EAST

POLICIES OF APARTHEID OF THE GOVERNMENT OF SOUTH AFRICA

LAUNCHING OF GLOBAL NEGOTIATIONS ON INTERNATIONAL ECONOMIC COOPERATION FOR DEVELOPMENT

UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

PROTECTION OF GLOBAL CLIMATE FOR PRESENT AND FUTURE GENERATIONS OF MANKIND

EXTERNAL DEBT CRISIS AND DEVELOPMENT

NARCOTIC DRUGS

Letter dated 14 June 1991 from the Permanent Representative of Barbados to the United Nations addressed to the Secretary-General

Upon instructions from the Minister of Foreign Affairs of Barbados and current Chairman of the Standing Committee of Ministers responsible for Foreign Affairs of the Caribbean Community (CARICOM), I have the honour to transmit the attached copy of the Communiqué of the Seventeenth Meeting of the Standing Committee, which took place in Barbados on 13 and 14 May 1991.

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* A/46/50.

I have the further honour to request that the present letter and attached Communiqué be circulated as an official document of the General Assembly under items 31, 35, 37, 43, 79, 80, 82 and 97 of the preliminary list.

(Signed) E. Besley MAYCOCK
Ambassador
Permanent Representative

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ANNEX

Communiqué issued on 14 May 1991 in Barbados by the Seventeenth Meeting of the Standing Committee of Ministers responsible for Foreign Affairs of the Caribbean Community

The Standing Committee of Ministers responsible for Foreign Affairs (SCMFA) of the Caribbean Community held its Seventeenth Meeting in Christ Church, Barbados on 13-14 May 1991. This was preceded by a Preparatory Meeting of Officials on 9-10 May 1991. The Meeting was attended by all States comprising the membership of the Standing Committee. The Heads of Delegation were: Mr. Eric Challenger, Permanent Secretary, Ministry of External Affairs, Antigua and Barbuda; Hon. Sir Clement Maynard, Deputy Prime Minister and Minister of Foreign Affairs, The Bahamas; Hon. Maurice King, Minister of Foreign Affairs, Barbados; Hon. Said Musa, Minister of Foreign Affairs, Belize; Hon. Brian Alleyne, Minister of External Affairs and OECS Unity, Dominica; Hon. Francis Alexis, Attorney-General, Grenada; H.E. Dr. Cedric Grant, Special Adviser on Foreign Affairs to the President of the Cooperative Republic of Guyana on Foreign Affairs; Sen. the Hon. David Coore, Minister of Foreign Affairs and Foreign Trade, Jamaica; Dr. William Herbert, Ambassador, Extraordinary and Plenipotentiary, St. Kitts and Nevis; Hon. Neville Cenac, Minster of Foreign Affairs, Saint Lucia; Hon. Jonathan Peters, Minister of Foreign Affairs in the Prime Minister's Office, St. Vincent and the Grenadines; Sen. the Hon. Dr. Sahadeo Basdeo, Minister of External Affairs and International Trade, Trinidad and Tobago.

Mr. Roderick Rainford, Secretary-General of the Caribbean Community, chaired the Opening Ceremony.

The Hon. Maurice A. King, Minister of Foreign Affairs, Barbados, delivered the Feature Address.

Minister King, in welcoming delegates to Barbados, referred to the challenges confronting the regional integration movement in the 1990s and the need to adopt and respond positively and sensibly to the rapidly changing circumstances at the regional and international level.

The Minister added, "the challenge before this Committee is to come up with innovative and practical solutions which will propel our Movement through the difficult environment of the 90s and into the Twenty-First Century. I am convinced that we need to inject a greater sense of urgency in the Standing Committee of Ministers responsible for Foreign Affairs in its role of coordinating the foreign policies of the Member States".

The Meeting was addressed by the Hon. Jonathan Peters, Minister of Foreign Affairs in the Prime Minister's Office, St. Vincent and the Grenadines as outgoing Chairman of the Standing Committee.

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Sen. the Hon. David Coore, Minister of Foreign Affairs and Foreign Trade, Jamaica, replied on behalf of visiting delegations.

The Hon. Maurice King, was elected Chairman of the Meeting and the new Chairman in office of the Standing Committee.

THE TRANSFORMATION OF THE INTERNATIONAL ENVIRONMENT

The Ministers observed that the Meeting of the Standing Committee was taking place against the background of a continued rapid transformation of the international environment. This transformation is reflected in, among other things, the breakdown of the rigid bipolar system which had been in existence for more than four decades, a global trend toward the formation and strengthening of large economic blocs and the incorporation of environmental issues as a major element in international relationships.

The Ministers also welcomed a growing shift towards multilateral solutions to global security issues reflecting a more enhanced role for the United Nations.

The Ministers considered that these factors, among others, together created challenges as well as opportunities for small States, such as those of CARICOM, and that countries such as those of the Region could become a casualty of marginalisation if they do not take joint action to meet these challenges.

In this regard, the Ministers reviewed a number of global and regional issues and achieved considerable convergence and coordination of views on these matters.

THE MIDDLE EAST

The Ministers recalled the recent challenge to the principle of the territorial integrity of states, in the Gulf Crisis, and stressed the importance of this principle for small states. They regretted the need for the use of force in the settlement of the crisis, and reiterated their strong commitment to the principle of the peaceful settlement of disputes among states.

The Ministers also recognised that tension and the potential for conflict remain in the Middle East, and restated their conviction that a solution to the problems facing that region must be based on established principles such as the right of the Palestinian people to a homeland, the withdrawal of Israel from the occupied lands, and the right of all states in the region, including Israel, to live in peace and security within recognised and secure borders in accordance with Security Council Resolutions 242 and 338.

The Ministers in this regard re-emphasised the need for an International Conference on the Middle East, and hoped that the present diplomatic efforts in that regard that were in train in the Middle East will be successfully concluded.

SOUTH AFRICA

In analysing recent developments in South Africa, the Foreign Ministers noted that there had been a number of positive developments. They noted, for example, that the de Klerk Government, as a result of the dynamics of internal as well as international events, had moved further towards dismantling the system of apartheid. In this regard, they applauded the constructive role that the African National Congress (ANC) continued to play by engaging in dialogue with the de Klerk regime.

The Ministers, however, expressed their concern over what appeared to be the undue haste by several countries to re-integrate South Africa into the international community and to terminate the regime of sanctions against that country before apartheid has been completely abolished.

The Ministers, therefore, re-emphasised the Community's endorsement of the decision taken at the last meeting of the Commonwealth Committee of Foreign Ministers on Southern Africa in February of 1991 in favour of the continuation of sanctions against the South African Government until practical steps towards the eradication of apartheid are taken.

BANGLADESH

The Ministers expressed their solidarity with the Government and people of Bangladesh at this time of widespread tragic loss of life and property occasioned by the recent natural disasters in that country, and urged the international community to respond generously and quickly to Bangladesh's urgent need for assistance in overcoming the results of the disaster.

ORGANISATION OF AMERICAN STATES (OAS)

The Ministers noted with satisfaction that following the entry into force of the Protocol of Cartegena on 10 December 1990, Belize and Guyana were admitted as Members of the OAS. They welcomed this positive development which marked the culmination of a long campaign, and expressed the conviction that both Member States would contribute significantly to the furtherance of the objectives of the Organisation.

They reiterated their conviction that the strengthening of the OAS was of vital importance, and that in this context all attempts should be made to resolve the financial crisis of the Organisation.

They also noted the interest of the Organisation in the progress of democracy in the Region, and in this regard noted with satisfaction the significant OAS/CARICOM contribution to the elections held in Haiti in December 1990, and the Organisation's contribution to the search for a peaceful solution to the problems facing Central America.

CARICOM/LATIN AMERICAN RELATIONS

The Ministers received the Report of the Minister of Foreign Affairs of Jamaica, which is CARICOM's representative on the Rio Group, on developments within the Group since CARICOM was admitted as a member.

While the Ministers welcomed evidence of a substantial strengthening of relations between the CARICOM Community and Latin America, they nevertheless agreed that there was need for a more structured and coordinated approach to the implementation of all decisions and agreements reached between the Community and Latin America.

The Ministers noted the evolution of the peace process in the Central American Region and, in particular, the recent developments towards a resolution of the internal insurgencies in Guatemala and El Salvador.

They also noted the positive results emanating from the recent summit between Belize and Honduras.

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BELIZE/GUATEMALA

The Ministers welcomed the Report of the Government of Belize on the status of its relations with Guatemala.

The Ministers called for the continuation of dialogue between the Governments of Belize and Guatemala and expressed the hope that the progress made in the work of the Joint Commission and the understandings reached would now lead to the conclusion of a comprehensive Treaty to provide a just and lasting solution to the border problem between the two countries. They urged the Government of the United Kingdom to support all efforts by Belize and Guatemala to develop programmes of mutual benefit to the two countries.

The Ministers reaffirmed their resolve to work towards continuing the regional and international support for Belize's sovereignty and territorial integrity. They agreed to render appropriate assistance to the Government of Belize in its efforts to conclude a Treaty with Guatemala.

They declared that an early resolution of the problem between Belize and Guatemala would facilitate the deepening of relations between the Caribbean Community and the countries of Central America.

GUYANA/VENEZUELA

The Ministers examined developments in Guyana/ Venezuela relations and noted that functional and economic cooperation between the two states continued to expand, especially in the important areas of Energy, Health, Education and Trade. They agreed that this situation augured well for the overall bilateral relationship between the two states.

On the specific question of the border controversy which Venezuela has with Guyana, the Foreign Ministers registered their appreciation of the work of the "good officer", Mr. Alister McIntyre, and noted that the Secretary-General of the United Nations had received a report from representatives of the two states on 5 April 1991.

The Ministers reviewed these and other facts on this issue and re-affirmed their support for the sovereignty and territorial integrity of Guyana.

HAITI

In reviewing CARICOM's continuing relationship with Haiti, Ministers reiterated their expectation that the recent electoral success in Haiti would serve as a catalyst to strengthen democratic processes and encourage economic development.

The Ministers received the Report of the Senior Electoral Officials who had coordinated CARICOM's delivery of assistance to the Haitian Provisional Electoral Council and expressed satisfaction at reports of the observers' positive contribution to the Haitian Electoral process in collaboration with the Organisation of American States (OAS).

The Ministers also received a Report on the Technical Mission of the CARICOM/Rio Group which had visited Haiti 2-4 April 1991 under the leadership of Minister Ben Clare of Jamaica and they re-affirmed the commitment of CARICOM Governments to support, within their means and in close collaboration with other international organisations and financial institutions, requests from the Haitian Government for technical and development assistance.

SITUATION IN SURINAME

The Ministers considered the question of the evolution of events in Suriname and analysed the developments attaching thereto.

The Ministers recalled the position taken at the February 1991 Meeting of the Conference of Heads of Government deploring the use of military coercion and pressure to bring about a change in the Administration in Suriname.

They took note of the arrangements being put in place for the conduct of elections in May this year and the participation of CARICOM observers at these elections. They expressed the hope that the outcome of the elections would facilitate resolution of the problems which confront Suriname.

COORDINATION OF EXTERNAL REPRESENTATION

The Ministers noted that this issue encompasses a whole spectrum of challenges and possibilities for CARICOM countries in the overall field of coordination of external representation and recalled that this has been engaging their attention for some time now. They recognised that there are problems as well as benefits inherent in any system of joint external representation, but agreed that it was imperative for new impetus to be given to this issue in view of the dynamic international political and economic circumstances prevailing, and the increasing financial and human resource constraints facing CARICOM Member States.

The Ministers decided that action should be taken as a matter of urgency to make arrangements for joint or coordinated representation in the Far East, and to that end agreed to the establishment of a Working Group to develop concrete proposals on this matter, among other things, for the consideration of the Community.

INTERNATIONAL ECONOMIC ISSUES

The Ministers, recognising that the economies of CARICOM Member States are closely intertwined with the rest of the global economy through such links as international trade in goods and services, energy and capital goods, tourism services, finance, investment and technology, migration and a shared physical environment, reviewed a range of current issues in the international economy with major significance for its members.

The Ministers noted the marked slowdown in the rate of growth of the economies of both the industrialised and developing countries. They concluded that the prospects for most commodities, including the major commodities produced in CARICOM - sugar, bauxite and alumina, and oil - were not good.

The Ministers expressed the hope that efforts to reactivate the Uruguay Round of Multilateral Trade Negotiations would not only be successful but that the processes would be open and ensure the balancing of the interests of all countries.

With regard to the debt burden of developing countries, the Ministers welcomed the three new proposals for easing the debt burden which emerged in 1990 - the British proposal known as the Trinidad and Tobago Terms, the proposal by the Netherlands

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Development Minister, and the debt element of President Bush's Enterprise for the Americas Initiative (EAI). They expressed the hope that these initiatives would be made operational in the shortest time. The Ministers, however, remained concerned that no proposal had emerged from the donor community to treat with the debt to the multilateral financial institutions which is of major concern to several CARICOM countries.

The Ministers noted that despite the steady decrease in the level of available resources, the demand for international finance is likely to intensify during the current year as new claimants arise in the aftermath of the Gulf War and from the effort at economic reconstruction in Eastern Europe. In this context they took note of the establishment of the European Bank for Reconstruction and Development with its broad support from the donor community.

In relation to the EAI, Ministers noted that the Community was coordinating its response on a regional basis and in consultation with Latin America.

The Meeting noted that the Interlocutory Group established by the Heads of Government had submitted a Draft Trade and Investment Framework Agreement to the Administration of the United States for negotiation.

The Ministers acknowledged the importance of continuing dialogue between CARICOM States and their hemispheric neighbours in the USA and Canada, to the mutual benefit of the people of these countries.

ENVIRONMENT

In considering the issue of the Environment, the Ministers of Foreign Affairs emphasised the need on the part of CARICOM States for adequate preparation to ensure their effective participation in the United Nations Conference on the Environment and Development which is scheduled to convene in Brazil in 1992. In this context, Ministers expressed the view that the preparatory meetings held in Trinidad and Tobago, Jamaica and Mexico, as well as the recently concluded meeting of the Governing Council of UNEP in Nairobi, constituted a significant beginning to the process of preparation.

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The Ministers also observed that in advancing such preparations account must be taken of the following:

- the particular perspectives of the individual Member States, especially Small Island States of the Community, the necessary link between the Environment and Development, the seminal role of the non-governmental organisations in this matter, and the possible impact of the North/South differences on the overall need for balanced decisions, treaties, conventions, and agreements on the Environment.

The Ministers agreed on the importance for all Member States making arrangements for effective particiaption in the remaning preparatory process and the UNCED itself.

The Ministers also took note of the critical importance of Climate Change and the Climate Change Convention and urged the effective participation of the CARICOM States in the negotiations for that Convention.

DRUG TRAFFICKING AND ABUSE

The Ministers noted that the issue of drug abuse and drug trafficking continued to be one of grave concern to the countries of the Region.

They reaffirmed the need to maintain and strengthen cooperation in this area in a continuing effort to intensify the fight against the use and trafficking in illicit drugs. In this regard, the Ministers noted the continuing work taking place under the Regional Drug Programme and urged greater collaboration among the countries of the Caribbean Community towards the realisation of the objectives of the programme.

The Ministers reviewed developments in the international anti-drug campaign over the past year and expressed the Community's recognition of the need for continued and increased international cooperation and collaboration at all levels in addressing the problems of drug trafficking and abuse. In this regard the Ministers took particular note of the mandate emanating from the Seventeenth Special Session of the United Nation General Assembly (UNGA) on Drugs, authorising the United Nations Secretary-General to select a small group of experts to assist him in identifying ways of enhancing the efficiency of the UN's structure for drug abuse control. Experts from CARICOM Member States participated actively in the work of the Group.

The Ministers noted that based on the recommendations of the Group of Experts, the UN had restructured the international institutional arrangements for dealing with the drug programme by combining existing institutions including the United Nations Fund for Drug Abuse Control (UNFDAC) and the UN Division on Narcotic Drugs into a single entity in Vienna headed by an Under-Secretary-General with an increased staff.

INTERNATIONAL POLITICAL ENVIRONMENT

The Ministers reviewed the continuing developments consequent upon the changing relationship between the super-powers, and noted that the welcomed stabilisation of the international political climate was accompanied by dynamic and fundamental changes in international relations, which were marked by an increasing tendency towards blocs and the consolidation of groupings at the regional and sub-regional levels. They reflected on the implications of these developments for small states such as those in the Caribbean Community, and reiterated their commitment to ensuring that CARICOM maintained its position in the international community of nations through increased coordination.

The Ministers also reviewed developments in the critical problems of illegal drug trafficking, and the degradation of the environment which, while being of concern to the international community, had a particularly debilitating effect on Small Island Caribbean States, and pledged their commitment to participating effectively and with increased coordination, along with the other members of the international community, in seeking creative ways to resolve these problems. In this context they paid particular attention to the upcoming United Nations Conference on the Environment and Development scheduled to be held in Brazil in 1992.

The Ministers also reaffirmed their commitment to human rights, and reiterated their continuing concern at the situation in South Africa. In the latter regard, the Ministers expressed their concern that the removal of sanctions with undue speed might delay rather than hasten the process of the dismantling of apartheid.

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DATE AND VENUE

The Ministers reconfirmed their acceptance of the offer of the Government of The Bahamas to host the Eighteenth Regular Meeting in Nassau in May 1992.

UNITED NATIONS

A E

General Assembly

Economic and Social Council

Distr.
GENERAL

A/46/265
E/1991/105
20 June 1991

ORIGINAL: ENGLISH

GENERAL ASSEMBLY
Forty-sixth session
Item 83 (f) of the preliminary list*
OPERATIONAL ACTIVITIES FOR DEVELOPMENT: WORLD FOOD PROGRAMME

ECONOMIC AND SOCIAL COUNCIL
Second regular session of 1991
Item 11 of the provisional agenda**
OPERATIONAL ACTIVITIES FOR DEVELOPMENT

Participation of the United Nations in the review of the governance arrangements of the World Food Programme

Report of the Secretary-General

INTRODUCTION

1. In its resolution 45/218 of 21 December 1990, the General Assembly recognized the need for improved governance arrangements for the World Food Programme (WFP) consistent with its programme requirements, its accountability to member States and its characteristics as an entity of the United Nations system, urged the Committee on Food Aid Policies and Programmes to complete expeditiously its review of governance arrangements and requested the Secretary-General to continue to participate fully in the review of governance arrangements of WFP and to report to it at its forty-sixth session, through the Economic and Social Council, on the participation of the United Nations in the review of those governance arrangements. In pursuance of that request, the Secretary-General submits herewith a report on the participation of the United Nations in the review.

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* A/46/50.

** E/1991/100.

II. WORK OF THE COMMITTEE OF FOOD AID POLICIES AND PROGRAMMES

2. At its twenty-ninth session (4-7 June 1990), the Committee of Food Aid Policies and Programmes (CFA) decided to undertake a review of the governance of WFP and the relationship between the United Nations, the Food and Agriculture Organization of the United Nations (FAO) and WFP, and to establish a subcommittee to study and make recommendations regarding the proposals put forward by the member States, the Executive Director of WFP, the Director-General of FAO and the Secretary-General of the United Nations.

3. Recognizing the need for improved governance arrangements for WFP consistent with its programme requirements, its accountability to member States and its characteristics as an entity of the United Nations system, the Economic and Social Council, in its resolution 1990/79 of 27 July 1990, welcomed the decision of CFA to establish a subcommittee to review the governance of WFP and the relationship between the United Nations, FAO and WFP.

4. In order to facilitate participation of the United Nations in the work of CFA and its subcommittee in that review, the Secretary-General appointed Mr. Peter Hansen, Executive Director, United Nations Centre on Transnational Corporations, to coordinate the preparation and participation of the United Nations.

5. In a letter dated 2 August 1990 to the Director-General of FAO, the Secretary-General expressed his conviction that a positive response to the concerns expressed by Member States would facilitate a solution to the various existing difficulties, and he assured the Director-General of the full cooperation of the United Nations in providing such a positive response.

6. In preparation for the task, the United Nations carried out, inter alia, a review of the administrative and financial aspects of existing and proposed modalities of the relationship between WFP, FAO and the United Nations, taking into account various arrangements between the United Nations and its subsidiary bodies and organizations that enjoy a different degree of autonomy, particularly programmes such as the United Nations Development Programme, the United Nations Children's Fund, and the United Nations Population Fund.

7. At the opening of the first session of Subcommittee on the Governance of the World Food Programme (3-11 September 1990), the Secretary-General, in his message, stated that WFP, since its inception in 1961 as an experimental programme of approximately $100 million, had become an established and major actor in the operational activities for development of the United Nations system, with a current target for contributions of $1.5 billion and that the development of WFP operations justified a careful review of the basic arrangements governing its management.

8. The Secretary-General was of the view that, as a general policy, it was important to maintain the principle of a close relationship between WFP and FAO and the United Nations and to maintain WFP as equally balanced between the two parent organizations. The arrangement envisaged was one of close

cooperation. It was stressed that within that general institutional framework a wide range of organizational arrangements was possible with regard to intergovernmental supervision and direction (CFA) and the secretariat, and that it was up to delegations to recommend those arrangements which would best meet the needs of WFP. The central concern was that WFP should have the capacity to carry out its mission in an effective manner. As WFP was not solely a subsidiary organ of either the United Nations or FAO, but a joint organ, the Executive Director of WFP should have the necessary authority to administer it under his responsibility and under the guidance of CFA.

9. The first session of the Subcommittee focused its deliberations on issues related to (a) the role of CFA, (b) the role of the Executive Director of WFP, (c) the relationship of WFP with the United Nations and FAO, and (d) general principles of food aid policies. Further discussion took place at the second session of the Subcommittee (8-12 October 1990) on issues related to (a) the size and composition of CFA, (b) authority over the Trust Fund and (c) emergency operations, in addition to the issues discussed at the first session.

10. In the course of the discussion in the Subcommittee, the Representative of the Secretary-General was called upon to comment on various proposals and issues raised by delegations.

11. Although no agreement was reached at the first and second sessions of the Subcommittee on specific recommendations to CFA, there was a wide range of convergence of views in many areas, including:

(a) The strengthening of CFA to provide intergovernmental supervision and direction of WFP, including the enlargement of its membership;

(b) The provision of greater authority to the Executive Director of WFP to administer the Programme, including personnel, administrative and budgetary matters;

(c) The need for the United Nations and FAO to remain parent bodies of WFP in a relationship based on close cooperation.

12. CFA, at its thirtieth session, considered the report of the Subcommittee on the work of its first and second sessions. In order to finalize its own proposals on this question, CFA established a sessional working group to present recommendations. On the basis of the proposals of the working group, CFA adopted by consensus a package of recommendations relating to the governance of WFP. CFA also decided that the working group should meet for one week from 28 January 1991 to translate the agreed recommendations into specific revisions of the General Regulations for WFP.

13. CFA requested the Office of Legal Affairs of the Secretariat to prepare, in consultation with FAO and WFP, starting texts for consideration by the working group.

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14. In pursuance to that request, the Office of Legal Affairs prepared and submitted to the working group a proposed revised text of the General Regulations, after consultation with FAO and WFP.

15. The working group of CFA met from 28 January to 1 February 1991. It expressed its appreciation for the comprehensiveness and timeliness of the starting text of the revised General Regulations as prepared by the Office of Legal Affairs, and considered carefully the comments and clarifications of the legal experts and representatives from the United Nations, FAO and WFP.

16. After examining the proposals contained in the starting text in light of the terms of reference established by CFA, the working group recommended by consensus draft revised General Regulations for consideration by CFA at its special session to be held in March 1991. The working group also recommended for consideration of CFA draft resolutions forwarding the draft revised General Regulations to the Economic and Social Council and the Council of FAO and from the Economic and Social Council and the Council of FAO to the General Assembly and the FAO Conference.

17. The working group further recommended that at its special session the Committee should instruct the Executive Director of WFP to prepare draft financial regulations for approval as soon as possible by CFA after receiving advice from the Advisory Committee on Administrative and Budgetary Questions and the FAO Finance Committee.

18. The special session of CFA took place on 18 and 19 March 1991 (see E/1991/69). At that session the Committee adopted by consensus and as a whole the report of the working group and its recommendations.

19. The Secretary-General stated in a message that the United Nations welcomed the consensus reached by the member States on the governance of WFP. It also welcomed the decision made to maintain WFP as a joint programme of the United Nations and FAO, thereby reaffirming the important linkage of food aid to development, on the one hand, and to food production and nutrition, on the other. The Secretary-General in his message also expressed his confidence that with the proposed changes, WFP would be able to improve further on its impressive performance, while continuing to draw upon the technical services of FAO and the United Nations, as well as other appropriate organizations of the United Nations system. It was hoped that the changes would bring about closer cooperation between WFP and its parent organizations. Such cooperation was not only desirable but essential, given the complexity of development problems and the increasingly protracted nature of emergency assistance. The United Nations expressed its readiness to review how it could provide better support to WFP to ensure the development underpinnings of its activities.

20. The Secretary-General further stated that the United Nations welcomed in particular the recommendation to include in the revised regulations a provision for the Secretary-General to draw on WFP in providing humanitarian relief assistance. That would enable the United Nations to provide such assistance in a timely manner. To that end, the United Nations expressed its

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willingness to continue to coordinate its activities fully with those of concerned organizations of the United Nations system and with the efforts of non-governmental organizations.

21. In conclusion, the Secretary-General expressed the hope that with the envisaged changes, the Programme would enjoy even greater support from the international community, and he called upon all Governments in considering their support and contributions to the Programme to take fully into account the increasing needs for food aid as development assistance as well as for emergency purposes. He stated that WFP had proven to be an effective multilateral instrument for emergency and development assistance and that with better governance it deserved greater support for its future activities.

III. DELIBERATIONS OF THE FAO COUNCIL

22. The FAO Council, at its ninety-ninth session held in Rome from 10 to 21 June 1991, reviewed the recommendations of CFA on the governance of WFP and the relationship between the United Nations, FAO and WFP. Members of the FAO Council welcomed the recommendations reached by consensus at CFA and decided to transmit to the FAO Conference for its adoption the draft recommendations of CFA on this question.

UNITED
NATIONS

A E

General Assembly
Economic and Social Council

Distr.
GENERAL

A/46/266
E/1991/106
25 June 1991

ORIGINAL: ENGLISH

GENERAL ASSEMBLY Forty-sixth session Item 84 of the preliminary list*	ECONOMIC AND SOCIAL COUNCIL Second regular session of 1991 Item 16 of the provisional agenda**

INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION

Report of the Secretary-General

SUMMARY

In accordance with requests contained in resolutions 44/236 of 22 December 1989 and 45/185 of 21 December 1990, the present report contains information on the implementation of the plan of action for the International Decade for Natural Disaster Reduction. It reviews activities undertaken at the country level and by organizations of the United Nations system, and also outlines organizational and financial arrangements.

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* A/46/50.

** E/1991/100.

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I. INTRODUCTION

1. In designating the 1990s as the International Decade for Natural Disaster Reduction in its resolution 44/236 of 22 December 1989, the General Assembly decided to include on the agenda of its forty-sixth session an item entitled "International Decade for Natural Disaster Reduction" and requested the Secretary-General to report biennially on the activities of the Decade to the Assembly through the Economic and Social Council. At its forty-fifth session, the General Assembly, taking note of the progress report submitted by the Secretary-General (A/45/621), in its resolution 45/185 of 21 December 1990 also requested the Secretary-General to report on the implementation of the programmes and activities of the Decade.

2. It will be recalled that the General Assembly's recommendations on the implementation of the Decade were contained in the International Framework of Action for the International Decade for Natural Disaster Reduction annexed to resolution 44/236, which also defined the organizational arrangements for the Decade. The present report contains information available as at 23 May 1991 on the implementation of programmes and activities of the Decade and on organizational and financial arrangements. An addendum will be issued later in the year providing up-to-date information and also making available the annual report of the Scientific and Technical Committee, which is also requested by the General Assembly in resolution 44/236.

II. INTERNATIONAL FRAMEWORK OF ACTION FOR THE DECADE

A. General

3. In the annex to resolution 44/236, the General Assembly established the International Framework of Action for the Decade, containing guidelines on policy measures to be taken at the national level and actions to be taken by the United Nations system, and providing for organizational and financial arrangements, including the setting up of a special high-level council, a scientific and technical committee and a secretariat. Information on the implementation of that decision follows. It can be observed that, in this first period of the Decade, the policy commitment embodied in the proclamation of the Decade by Member States of the United Nations as at 1 January 1990 has been consolidated through the progressive establishment of national committees and focal points for the Decade, which has required internal policy decisions and, in some instances, legislation. This gradual process indicates that the new emphasis on action to be taken before the occurrence of disasters, compared with the current prevailing trend of *ex post facto* response, is beginning to emerge.

B. Policy measures at the national level

4. As proposed in recommendations of the International Ad Hoc Group of Experts (A/44/322/Add.1-E/1989/114/Add.1), that led to the launching of the Decade, the major focus for policies and activities designed to reduce the vulnerability of socio-economic systems to major hazards lies with the vulnerable countries themselves, as part of the national development process. In this early phase of the Decade, a growing number of countries have taken measures to develop national disaster mitigation programmes, which include economic aspects, the monitoring of the major natural hazards, the development of structural and non-structural measures, the establishment or improvement of early warning systems and the setting up of preparedness measures. Taken as a whole, all these steps will eventually become part of coherent national policies designed to reduce the impact of disasters. In these actions, a major part is being played, as recommended by the General Assembly, by the national committees for the Decade.

C. National committees and focal points

5. National committees are established in cooperation with relevant scientific and technological committees and other concerned sectors. To date, close to 90 national committees or focal points have been set up, each with varying terms of reference and legislative authority; frequently, existing disaster management mechanisms have been restructured to reflect the newly recognized objective of disaster prevention and preparedness. A list of national committees for the Decade is given in the annex.

6. The growing number of national committees indicates that their pivotal role in implementing Decade activities at the national level has been recognized and that they will also be in a position to contribute at regional and interregional levels. National committees are in fact assisting in identifying national priorities, formulating and implementing disaster mitigation and prevention plans, developing and monitoring projects, as well as providing information and advice to concerned Governments, public services and related organizations, and to the general public sector as a whole. Naturally the composition of individual national committees varies in relation to a number of factors, including the level of development of the country concerned, the capacity and expertise available, and the frequency and nature of natural disasters likely to affect the country, as well as the level of awareness of the potential benefits of disaster mitigation.

7. One of the essential tenets of the Decade concept is that natural disaster mitigation policies should be effectively implemented with the assistance of national committees in the context of national development plans. In this light, it has been estimated that the material and economic impacts of a serious natural disaster in some countries can undo up to five years of hard-earned development progress. The more these impacts can be reduced, the greater will be the contribution of disaster reduction measures to the development process. Conversely, planning for development must take into account disaster vulnerability.

8. With that in mind and in order to prepare for the work of the Scientific and Technical Committee, the secretariat of the Decade has written to national committees with a view to identifying problems and gaps at the national level. The replies received to date indicate that few national committees are at this stage in a position to function effectively and it is obvious that many of them will need advice and support. There is clearly an urgent need on the part of Governments for information on the purposes and functions of national committees, on the optimum composition of such committees and on the contributions they can make to national development. These views have been recognized, particularly by the Scientific and Technical Committee, which has made a number of recommendations in this direction. The required advisory material, which was contained in the appendix to the Secretary-General's proposals for the launching of the Decade (see A/44/322-E/1989/114), will be updated and further disseminated through the IDNDR Newsletter, contacts with national committees and their planned regional meetings. In so doing, advantage will also be taken of the assistance of the United Nations resident coordinators at national levels, as well as the assistance of national emergency teams being established as a result of the ongoing United Nations Development Programme (UNDP)/Office of the United Nations Disaster Relief Coordinator (UNDRO) training programme mentioned later in the present report. The question of resources to support implementation of disaster mitigation policies has also been identified and will have to be addressed.

D. Major meetings and events organized in connection with the Decade

9. It is encouraging to note that since the beginning of the Decade there has been a growing number of international, regional and national meetings relating to a wide variety of disaster mitigation aspects within the Decade. A calendar of major Decade-related events, which is also regularly updated and distributed, will be made available. More detailed information on a few of the more relevant meetings is given in the following paragraphs. The focus of these meetings indicates that increasing attention is being paid to enhancing the awareness of the potential benefits of disaster mitigation.

International Decade for Natural Disaster Reduction International Conference (27 September-3 October 1990, Japan)

10. The purpose of this major Conference, held at Yokohama and Kagoshima and organized by the Government of Japan, the City of Yokohama, the Kagoshima Prefecture and the United Nations Centre for Regional Development, was to exchange ideas and experiences and to discuss international cooperation and regional development planning for natural disaster reduction. It was attended by some 1,300 administrators and scientists from 43 countries and 10 international organizations. The United Nations Disaster Relief Coordinator and the Director of the Decade secretariat both participated in the Conference, the proceedings of which were brought to the attention of the General Assembly at its forty-fifth session.

Workshop on Prediction and Perception of Natural Disasters (23-26 October 1990, Italy)

11. This tripartite meeting, organized by the Italian National Research Council, the United States National Science Foundation and the Decade secretariat, was attended by 70 experts from 21 countries and from United Nations and other intergovernmental and non-governmental organizations. The purpose of the workshop was to conduct an analysis of the relationship between scientific prediction and the actual perception in society of the threat presented by natural hazards. There is in fact a worrisome gap between the hazard assessment and prediction made by the scientific world and their understanding outside the scientific sector, particularly among the exposed population, the information media and the responsible authorities. A number of recommendations were made for follow-up action during the Decade.

Economic and Social Commission for Asia and the Pacific/Office of the United Nations Disaster Relief Coordinator Regional Symposium on the International Decade for Natural Disaster Reduction (11-15 February 1991, Thailand)

12. This Regional Symposium was organized and held at Bangkok by ESCAP, in cooperation with UNDRO and with generous financial support from Japan, to mark the launching of the Decade in the ESCAP region and identify regional priorities for implementation. Participants from 22 countries that are members and associate members of ESCAP attended. Representatives of organizations of the United Nations system, including the Director of the Decade secretariat, and representatives from other organizations also attended. The symposium covered all aspects of natural disaster reduction and prevention and produced a plan of action supported by numerous recommendations, including a proposal to create a policy-level committee at government level to oversee the activities of the Decade and the need to convene regional meetings of representatives of national committees leading to a global conference towards the middle of the Decade.

International Decade for Natural Disaster Reduction Think Tank meeting in preparation for the first session of the Scientific and Technical Committee (12-15 November 1990, Italy)

13. This meeting was convened by the Decade secretariat at the invitation of and with support from the Italian Minister for Civil Defence and with financial assistance from UNDP, in order to identify those tasks which could usefully be accomplished by the first session of the then newly established Scientific and Technical Committee, the membership of which had been announced by the Secretary-General on 6 November 1990. Participants included some members of the new Committee as well as some members of its predecessor, the International Ad Hoc Group of Experts, together with other experts from various government, academic and private sectors and the United Nations system. The meeting was highly productive and made extensive suggestions concerning intermediate targets to guide implementation activities in the context of a proposed framework programme for the Decade; the Think Tank also identified certain criteria for project approval, as well as many of the key

actors in the Decade. The meeting was the first step in the preparation of the inaugural meeting of the Scientific and Technical Committee.

Inter-Agency Working Group (18-20 December 1990, Geneva)

14. As a follow-up to the above meeting, this Working Group convened by the Decade secretariat brought together 19 experts representing 14 organs and organizations of the United Nations system. The sessions were chaired by the Director of the Decade secretariat and by the Deputy to the United Nations Disaster Relief Coordinator. The main purpose was to consolidate and refine the advice received from the Think Tank meeting with a view to facilitating the preparation of documentation for the Scientific and Technical Committee and the submission of appropriate project proposals for consideration. The meeting was successful in confirming the commitment on the part of the United Nations system to the effective implementation of the Decade.

Regional Round Table on Disaster Mitigation Policies and Management (29 April-3 May 1991, Manila)

15. This Round Table was jointly organized at Manila/Puerto Azul by the Development Policy Forum of the German Foundation for International Development (DSE) and the National Disaster Coordinating Council of the Philippines in consultation with the Asian Disaster Preparedness Centre of the Asian Institute of Technology. The event was supported by the Government of Germany. It initiated a policy-level dialogue on an adequate governmental framework for natural disaster prevention that would match the goals of the Decade with the needs and resources of individual Asian countries. It also discussed the possibilities of international cooperation in this field and respective regional networking. The Round Table was attended by senior representatives from governmental and non-governmental organizations from China, India, Nepal, the Philippines, Sri Lanka and Viet Nam, including members of the Scientific and Technical Committee. The Director of the Decade secretariat and representatives from the United Nations system, the World Bank and the Asian Development Bank participated. The United Nations Disaster Relief Coordinator was represented.

International Conference on Disaster Communications (20-22 May 1991, Tampere, Finland)

16. This Conference was hosted by the Government of Finland and the city of Tampere and covened by the International Institute of Communications, in association with UNDRO, the International Telecommunication Union (ITU), the Office of the United Nations High Commissioner for Refugees (UNHCR) and the League of Red Cross and Red Crescent Societies. The Conference received major support from the Aamulehti Group of Finland and the Annenberg Washington Program in Communications Policy Studies at Northwestern University. The Conference adopted the Tampere Declaration on Disaster Communications, which reiterates the urgent need to improve international cooperation in communications and enhance national capabilities in order to reduce loss of life, damage to property and livelihoods, and damage caused to the environment

caused by disasters. To this end, the Declaration calls for the development of a convention on disaster communications, which should be viewed in the context of a future comprehensive accord on disaster management. The Conference was attended by experts from the fields of communications and disaster management representing both the public and private sector, as well as the United Nations system. It was chaired jointly by the United Nations Disaster Relief Coordinator, the Secretary-General of ITU and the Secretary-General of the League of Red Cross and Red Crescent Societies, and received wide media coverage.

E. The Scientific and Technical Committee

First session of the Scientific and Technical Committee of the International Decade for Natural Disaster Reduction (4-8 March 1991, Germany)

17. The first session of the Scientific and Technical Committee of the International Decade for Natural Disaster Reduction was held at Königswinter, near Bonn, from 4 to 8 March 1991, at the invitation of the German National Committee for the Decade and with the financial support of the Government of Germany. The meeting was chaired by Mr. James P. Bruce (Canada); 22 of the 25 members of the Committee attended. Fourteen representatives of organizations of the United Nations system and representatives of other governmental and non-governmental organizations, such as the International Council of Scientific Unions, the World Federation of Engineering Organizations, the Union of International Technical Associations and the League of Red Cross and Red Crescent Societies also participated. Agreement was reached on specific targets for the Decade, on the scope and framework of a Decade programme, on means of stimulating national committees and other participants, on an information strategy and on eight international demonstration "mega"-projects to launch the Decade's technical activities. The Scientific and Technical Committee also attached importance to dealing with natural disasters as an integral part of national development plans and in a coherent manner in relation to environmental issues. The second session of the Committee is planned for September and it is expected that the annual report of the Committee will be available as an addendum to the report of the Secretary-General at the forty-sixth session of the General Assembly. The following paragraphs provide an outline of the main recommendations made by the Scientific and Technical Committee at its first session concerning targets, a framework programme and project development and public information:

(a) Targets for achievement

The International Framework of Action set out in the annex to resolution 44/236 identifies the objective of the Decade as to reduce the loss of life, property damage and social and economic disruption caused by natural disasters, and to that end indicates five specific goals, which together provide an overall direction for action. Many post-disaster studies have demonstrated convincingly that certain mitigation measures have significantly reduced losses when a natural hazard strikes. For example, land use policies that avoid hazards and construction practices that enable structures to withstand severe stress have clearly saved lives and reduced damage. Thus, one way to assess progress of the Decade is to evaluate the application of proven loss reduction practices. Likewise the setting of targets will provide a yardstick of progress not only at the conclusion of the Decade but also in the course of its implementation.

In defining targets for the Decade, the Scientific and Technical Committee agreed that by the year 2000 all countries, some through regional arrangements, should have in place, as part of their plans to achieve sustainable development:

(i) National assessments of risks to populations from various types of disasters (e.g. floods, droughts, earthquakes, tropical cyclones, volcanoes, landslides, etc.);

(ii) National and/or local prevention and preparedness plans;

(iii) Access to global, regional, national and local early warning systems.

It also agreed on procedures for evaluating progress towards those targets.

The Committee further considered that achievement of those targets would require annual contributions to the International Decade for Natural Disaster Reduction trust fund of the order of 8 million United States dollars, of which $2 million would be necessary to support the Special High-Level Council, the Scientific and Technical Committee and the secretariat, and $6 million for seed money to stimulate appropriate projects at the field level. The total overall expenditure during the Decade would be much higher. Nevertheless, it was considered that the envisaged achievement of the targets could entail a potential reduction in loss of life by more than 50 per cent and reduction in financial losses due to damage by from 10 to 40 per cent, depending on the nature of the hazard. It will be recalled that present global losses have been estimated by the World Bank as being in the range of 250,000 deaths and $4 billion in damages per year.

(b) Framework programme

In considering a framework programme the Scientific and Technical Committee decided to adopt an activity structure that was common to all types of disaster rather than a structure based on the types of disaster. It therefore adopted seven major categories of technical projects:

(i) Identification of hazard zones and hazard assessment;

(ii) Vulnerability and risk assessment, cost/benefit analysis;

(iii) Awareness at the level of decision and policy makers;

(iv) Monitoring, prediction and warning;

(v) Long-term preventive measures, both structural and non-structural;

(vi) Short-term protective measures and preparedness;

(vii) Early intervention measures.

The seven categories would be supported by three key activities:

(i) Education, training and public information;

(ii) Transfer of technology;

(iii) Research on technology and policy.

(c) Project development

The concept of project development as conceived by the Scientific and Technical Committee necessitated consideration of three distinct procedures: the development of criteria for project approval, the identification of such projects and the selection of key projects requiring urgent implementation. In so doing the Committee identified a number of demonstration projects falling within the latter category, a list of which will be made available. Steps are being taken to develop detailed plans for the implementation of those projects, including costing, duration and benefits to be derived from them. Subsequently, donors, including the national Governments concerned, will be invited to contribute the necessary resources and technical support for implementation on either a bilateral or multilateral basis or through the trust fund for the Decade.

(d) Public information

In its resolution 44/236, the General Assembly requested the Secretary-General, in close association with the relevant organizations of the United Nations system, in particular through the Department of Public Information of the Secretariat, to assist in the formulation and implementation during the Decade of public information programmes aimed at raising public awareness of disaster prevention.

The Scientific and Technical Committee considered this matter in the light of previous proposals offered by the Rome Think Tank meeting and the Inter-Agency Working Group. In particular, it agreed on the structure of a possible information strategy for the Decade and identified target audiences, strategies and modalities for information exchange and dissemination, as well as supportive actions for information exchange and dissemination.

The publication of the first issue of the IDNDR Newsletter, "Stop disasters", published in cooperation with the Osservatorio Vesuviano, Italy, was especially welcome. The Newsletter assists in the exchange of information among national committees and at the same time encourages and promotes their involvement in the activities of the Decade.

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As regards the celebration of International Decade for Natural Disaster Reduction Day 1991, the Scientific and Technical Committee proposed that celebrations centre on the theme "Disaster Prevention, Development and Environment" and requested the secretariat to develop an appropriate slogan. National activities were to be encouraged and every effort should be made to inform national committees of events being organized elsewhere. It was noted that the IDNDR Newsletter would be an appropriate vehicle for conveying this information.

The Committee also noted that a special logo was being designed for the Decade and suggested that it could be incorporated in postage stamps that might be issued by Member States to commemorate the Decade.

III. ACTIVITIES OF THE UNITED NATIONS SYSTEM

18. In resolution 44/236, the General Assembly calls on organizations of the United Nations system and particularly UNDRO to assist countries in mitigating and preventing the effects of disasters. Most entities of the United Nations have initiated activities related to natural disaster prevention or mitigation, which are highlighted below, on the basis of information submitted by them.

Office of the United Nations Disaster Relief Coordinator

19. UNDRO is the only specialized body in the United Nations that deals exclusively with disasters and is the focal point for disaster management in the United Nations system. The tasks of UNDRO in relation to natural disasters encompass the complete disaster cycle, from the early warning phase preceding the actual impact or occurrence through the emergency management and response phase to the inclusion of disaster prevention aspects in reconstruction and rehabilitation and, finally, covering the issue of longer-term disaster mitigation, that is, applied disaster reduction as part of the development process. It is thus obvious that the majority of UNDRO activities during the reporting period have been directly related to the realization of the goals of the Decade.

20. UNDRO has continued to offer its specific expertise to the Decade secretariat and other entities within the Decade mechanism, inside and outside the United Nations, and has participated in the identification and evaluation of projects for possible inclusion in the programme of the Decade. In fact, UNDRO has developed several innovative approaches towards applying the Decade concept in a qualitative manner and going beyond a mere increase in volume. At the beginning of the Decade in particular, it has been considered imperative to initiate selected projects that successfully represent as many of the specific goals of the Decade, as possible and as such support and promote the establishment of concerted national strategies for its implementation.

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21. On one side, the Relief Coordination Branch has continued to evaluate national and international disaster response and coordination activities in order to provide indicators on remaining gaps in those fields and to initiate adequate development, whether by streamlining the institutional or legal framework for emergency response or by upgrading the technical tools, that is, communication or information management systems, to secure a higher level of efficiency. A major search-and-rescue initiative has been undertaken within which an international workshop was held in cooperation with the Government of Austria. UNDRO has also continued its efforts to implement the recommendations of the International Conference on Disaster Communications of March 1990, organized within the International Decade for Natural Disaster Reduction, with the support of the Government of Germany.

22. On the other hand, the Disaster Mitigation Branch has strengthened cooperation with all its partners in disaster mitigation, particularly the specialized agencies of the United Nations, the national committees for the Decade, Governments, regional institutions, the scientific and technical community, and, of course, the Decade's institutions, with the secretariat foremost. It has assisted countries at risk through, inter alia, projects of disaster preparedness, training activities and the formulation of pre-disaster plans, feasibility studies on national and regional disaster management, and seminars and workshops on long-term disaster mitigation.

23. Since the beginning of the Decade, such mitigation activities have been started or are being executed at country level in Chile, China, Colombia, Ecuador, Egypt, Grenada, Indonesia, Iran, Nepal, the Philippines, Somalia, Thailand and the Union of Soviet Socialist Republics. On a regional level, UNDRO engaged in mitigation projects on the Caribbean, the Mediterranean and the South Pacific. After 10 years of successful disaster mitigation within the Pan-Caribbean Disaster Preparedness and Prevention Programme, and with the active participation of UNDRO, the experience gained is being translated into a new phase of regional cooperation in disaster management. In the Mediterranean region, within the Cooperative Project for Seismic Risk Reduction, all Mediterranean countries prone to seismic hazard are actively coordinating their efforts to apply existing scientific knowledge and technology to seismic hazard analysis, seismic vulnerability and risk assessment, and practical risk reduction. In Fiji, UNDRO has opened its South Pacific Project Office in cooperation with UNDP and at the request of the Governments of the South Pacific region in order to identify, and assist in, activities of pre- and post-disaster management that implement the goals and objectives of the Decade.

24. Discussions at various levels during the early phase of the Decade have clearly identified the need to assess and standardize terminology used in interdisciplinary and field/office communication in disaster-related activities. To this end, UNDRO is aiming at a widely accepted and coordinated glossary of terms in cooperation with and on the basis of existing partial terminological efforts of all concerned national institutions and international governmental and non-governmental organizations.

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25. Continued and particular emphasis has been placed on two important strategic efforts to improve disaster management capabilities world wide. Together with UNDP, UNDRO has begun implementing the joint UNDRO/UNDP Disaster Management Training Programme. This programme aims at further professionalizing disaster management at the country level and within the United Nations system as a whole through sensitization, team-building and the provision of knowledge in order to integrate preventive planning firmly into the national development process. Policy makers are being made aware of the importance of according appropriate priority to the issue of disaster reduction, motivated to assess their national gaps and needs in this field and encouraged to develop national programmes and projects for international technical cooperation.

26. In the field of disaster-related information management, UNDRO has embarked on a project that builds on the existing United Nations International Emergency Network (UNIENET) and aims at creating an interactive electronic network for emergency management and disaster reduction purposes alike. Based on state-of-the-art technology, the system will comprise technical means for fast and reliable communication within the disaster management community, inform about available disaster-related information at all levels, provide access to such information sources and develop and maintain a limited number of core databases such as disaster statistics and a historical database. Within the project, countries at risk will be assisted to develop their own disaster-related data management systems, which can be integrated into the future global network.

Economic Commission for Europe

27. ECE has a number of specific activities related to the activities of the Decade, in particular in the areas of seismic events, forest fires, pollution and damage caused by storms, particularly in forest regions. Projects in each of these areas are being developed for implementation as Decade activities.

Economic and Social Commission for Asia and the Pacific

28. ESCAP covers a region with an overall population of about 3 billion, with 45 million more being added every year, and many of its member developing countries are situated in the world's hazard belts for earthquakes, windstorms, tidal waves, floods and drought. By some estimates, 85 per cent of the more than 4 million deaths from sudden natural disasters in the world in the period 1900-1990 occurred in Asia and the south-west Pacific. For the same period, windstorms and floods world wide accounted for almost 50 per cent of the nearly $100 billion total damage.

29. The frequency and intensity of adverse natural phenomena and the extensiveness and severity of the damage they cause seem to be increasing over time. Disastrous natural events struck the region again in 1988, 1989 and 1990 even before the full consequences of the adverse weather effects on the economies of the region in 1987 could be fully overcome. Cyclones, floods and drought affected the agricultural production of virtually the whole developing ESCAP region and very recently, in 1991, in a particularly disastrous way.

30. Losses due to natural disasters deprive developing countries of resources that could otherwise be used for economic and social development, thus further impeding their development process.

31. ESCAP's main activities in disaster mitigation address water-related disasters, the reduction of the impact of drought, the reduction of geologic disasters and disaster monitoring and warning. A study has been prepared on problems caused by natural disasters in selected least developed countries and island developing countries. A project on urban flood loss prevention was completed and a flood prevention manual is being published. Further water disaster projects are being initiated, including an assessment of the status of prevention in the region, and topical symposia on items of special interest are being organized.

32. In order to improve satellite crop monitoring, a regional evaluation seminar was held, which produced proposals for continuing the previous phase of this undertaking. Ongoing studies on geology for urban development and land use still continue and the resulting hazard maps have demonstrated their usefulness, particularly in human settlement planning. Remote-sensing techniques for the monitoring of natural disasters will continue to be examined, with a view to improving their use for least developed countries through transfer of technology.

World Food Programme

33. WFP is the food aid agency of the United Nations system and its main mandate in disaster situations is to respond to needs in the aftermath of an emergency. However, in its food-for-work activities in disaster-prone countries, WFP makes every effort to buttress the disaster prevention and preparedness structures, and to reinforce the people's capacity to withstand major food deficit crises. Projects are therefore prepared to take account of the national Decade committee programmes when these embrace people's food security considerations. These projects can be in various sectors of economic activity, but include mostly agroforestry, conservation of forests to stabilize hillsides and dune stabilization; physical conservation works, comprising various activities specifically designed to reduce the effects of natural disasters such as landslides, soil erosion, floods and storms; and rangeland management, protection of pastures and destocking and restocking of herds to reinforce the capacity of livestock herders to face up to seasonal and normal droughts.

34. Projects are currently being implemented in Bangladesh, China, Kenya and Indonesia.

World Health Organization

35. The involvement of WHO in disaster reduction has long stressed the importance of preventive measures and emergency preparedness. Moreover, WHO has given priority to linking disaster reduction measures to long-term development activities that ultimately strengthen the health preparedness and response capacities of its member States.

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36. WHO has continued its support for the Decade through both headquarters and its regional offices and programmes. This has included part-time secondment to the Decade secretariat.

37. Recognizing the need to promote disaster reduction initiatives in health, WHO declared the theme of World Health Day 1991 as disaster preparedness. Preparations for this global event, which took place on 7 April, included development of an information kit and a children's poster competition. Moreover, WHO produced a public information brochure entitled "Should Disaster Strike ... Health in the International Decade for Natural Disaster Reduction", and a video, "Before Disaster Strikes", now available in English and French.

38. The first WHO Expert Panel on Emergency Relief Operations was convened at Geneva from 11 to 15 March. This defined in detail the scope of WHO's role in disaster prevention and preparedness.

39. In addition to headquarters initiatives taken to support the Decade, WHO's regional programmes have also promoted it. The Pan-American Health Organization (PAHO) has played a key technical role in implementing the first regional training of trainers course in Colombia as part of the Disaster Management Training Programme. This has been undertaken in collaboration with the Organization of American States (OAS), UNDRO and UNDP. Such inter-agency cooperation is expected to be applied in the regional training activities to be undertaken in Africa, in cooperation with the WHO Pan-African Centre for Emergency Preparedness and Response at Addis Ababa.

40. Following the endorsement of the Scientific and Technical Committee, the Emergency Preparedness and Response Programme of PAHO is currently preparing to convene a regional meeting of representatives of national committees for the Decade and other key government departments in September 1991.

41. WHO's Regional Office for South-East Asia at New Delhi will for the first time conduct technical discussions on disaster management when its Regional Committee convenes in the last quarter of 1991.

42. In the South Pacific, WHO has established close working links with UNDRO and UNDP in regional disaster mitigation, specifically reflected in the development of a pilot health sector project in Samoa.

43. These Decade initiatives reflect WHO's priority to work closely with partners at the national level as well as with United Nations and non-governmental agencies to support sustainable disaster reduction efforts in health world wide.

World Meteorological Organization

44. WMO has responsibility within the United Nations system for activities relating to meteorology, climatology and operational hydrology. Within the context of the Decade, the Organization takes a leading role concerning mitigation of disasters caused by (a) tropical cyclones; (b) floods;

(c) tornadoes and severe thunderstorms; (d) other severe weather phenomena such as storm surges and major snowstorms; (e) landslides and avalanches; and (f) droughts.

45. WMO contributes to the mitigation of other types of disaster by its involvement in the meteorological and hydrological aspects of insect plagues and in the dissemination over its Global Telecommunication System of tsunami warnings. WMO activities related to drought are covered in the paper "WMO Strategy on Drought and Desertification".

46. The WMO secretariat has participated actively at all levels in Decade activities; a WMO staff member and a consultant have been seconded to assist in the work of its secretariat.

47. The WMO Plan of Action for the International Decade for Natural Disaster Reduction, which sets out the varied actions that are being undertaken as the Organization's contribution to the Decade, was adopted by the Eleventh World Meteorological Congress, in May 1991.

48. Specifically, in many developing countries, the two great impediments to improvements at national level in the near term are (a) a lack of knowledge and expertise in the technology concerned; and (b) lack of funds to install, operate and maintain systems using existing technology and procedures.

49. The basic requirements to overcome these impediments are technical cooperation activities with an emphasis on technology transfer and/or institution-building, provision of equipment and facilities, and human resource development.

50. As a first step as regards special projects for the Decade, WMO has developed plans for three relatively low-cost projects specifically geared to the goals of the Decade. These should be very cost-effective and have a significant impact at both international and national levels. The three projects concern a tropical cyclone warning system for the south-west Indian Ocean region; comprehensive risk assessment; and technology exchange for natural disasters.

51. Contact has been established with the International Seismological Centre with regard to the second and third projects.

52. Plans have also been drawn up by WMO for a series of regional technical cooperation projects in connection with the Decade and negotiations are under way for their funding.

53. A video and special brochure have been produced by WMO, emphasizing the special role to be played by meteorological and hydrological services in the mitigation of natural disasters. These have proved most successful in publicizing the Decade and encouraging participation at the national level.

Food and Agriculture Organization of the United Nations

54. FAO has continued its active participation in the arrangements for the Decade.

55. FAO has set up an informal interdepartmental group for the coordination of inputs to the Decade.

56. The support provided to the Decade is in the context of FAO's constitutional role in all matters related to food and agriculture, in particular, its mandate for the development, utilization and conservation of natural resources. Many if not most of FAO technical capabilities and assistance activities are relevant to rational management of natural resources. These same capabilities relate to natural disaster assessment, prevention, preparedness, mitigation and relief rehabilitation.

57. In this context, cooperative activities between FAO and other United Nations organizations and bodies include the arrangements concluded recently between FAO and UNDRO with a view to strengthening information exchange through their respective information systems, the Global Information and Early Warning System of FAO and the United Nations International Emergency Network of UNDRO. Under these arrangements, UNDRO has made a "window" available in its Network to other emergency databases and bulletin boards, as well as to other network users through electronic mail. The facility is now operational.

58. The coordinating role played by FAO in the monitoring and control of the desert locust and other migratory pests through its Emergency Centre for Locust Operations has continued. This central reporting and forecasting service assists member countries and regional organizations in their efforts to monitor and contain infestations.

59. The creation in 1988 of the Africa Real-Time Environmental Monitoring Information System (ARTEMIS), a satellite data receiving and processing system operational at the FAO Remote Sensing Centre at Rome since August 1988, has proved to be a useful instrument also with respect to disaster-related activities. ARTEMIS is a joint undertaking by the National Aerospace Laboratory of the Netherlands, in cooperation with the United States space agency NASA and the University of Reading in the United Kingdom of Great Britain and Northern Ireland, funded by the Government of the Netherlands through a special FAO trust fund.

60. ARTEMIS provides a wealth of data and images, produced in real time, which permit, inter alia, the monitoring of the status of the rainy season over Africa and hence the provision of timely information for use by systems that address early warning for food security and locust monitoring and control operations.

61. In order for these data to be made available in a timely manner to the most interested parties, the developing countries, FAO has joined forces with the European Space Agency (ESA) to create DIANA (Data and Information now Available in Africa), a special satellite communications system that enables

the direct transmission of the ARTEMIS data to users at regional and national levels. It is expected that DIANA will begin its demonstration phase by November 1991, starting with a user terminal at Nairobi, and possibly at Accra and Djibouti.

United Nations Educational, Scientific and Cultural Organization

62. The UNESCO subprogramme on natural hazards has been aligned with the goals of the Decade. It concerns the development of scientific and technical knowledge and the means to understand the causes of natural disasters and to mitigate their effects.

63. The interdisciplinary approach has been broadened to include not only the scientific and technological aspects of risk evaluation and mitigation, but also the educational and social aspects.

64. The promotion of national and regional monitoring networks for earthquakes, volcanoes, landslides and tsunamis has been enhanced. The International Mobile Early Warning System for Volcanic Eruptions continued to operate. The design and construction of disaster-resistant educational buildings are being encouraged increasingly, as is the protection of cultural monuments against the violent forces of nature.

65. A special project concerning the preparation of training materials for natural disaster reduction has been launched by UNESCO, with financial support from European donor countries. The establishment of an international institute for earthquake engineering and seismology in Central Asia has started under UNESCO supervision. The First International Conference on Seismology and Earthquake Engineering and the International Forum on Seismic Zonation were organized under the aegis of UNESCO.

66. The contribution of UNESCO to the United Nations Conference on Environment and Development will take into consideration the Decade. UNESCO's intergovernmental programmes, such as Man and Biosphere, the International Hydrological Programme and the International Geological Correlation Programme, as well as the programmes of the Intergovernmental Oceanographic Commission, have contributed to the activities of the Decade.

67. The study of snowmelt and flash floods, of extraordinary rainfall and of water hazard reduction in low-lying coastal regions, particularly regarding sea-level changes, has been accelerated. The ongoing build-up of scientific capacities of Sahelian countries in the field of agro-sylvio-pastoral management is being strengthened significantly in a longer-term UNESCO project.

68. A video on the understanding of volcanic hazards has been produced by UNESCO. The organization is also printing a promotional brochure describing its potential contribution to the Decade.

International Civil Aviation Organization

69. ICAO moved swiftly to amend its regulatory documents to include requirements to provide volcanic ash warning to aircraft. In order to support the warning system, ICAO sought help from States and international organizations to form an international airways volcano watch based on an observing triad comprising aircraft reports, reports from ground-based observing stations and monitoring by satellite.

70. Participating in the watch are the International Air Transport Association and the International Federation of Air Line Pilots' Associations, which provide special air reports of volvanic activity; WMO, which arranges the provision of observations of volcanic activity from all the many international ground-based observing networks and coordinates the use of meteorological satellites and techniques for forecasting volcanic ash trajectories; and the World Organization of Volcano Observatories, which arranges for critically important observations from volcano observatories strategically sited near active volcanoes.

71. Current work is concentrated on consolidating and extending the international airways volcano watch and improving the warning system based on operational experience gained during volcanic eruptions near air routes in South-East Asia and North America.

The United Nations Centre for Human Settlements (Habitat)

72. In keeping with pertinent decisions of the Commission for Human Settlements, Habitat has kept up the pace of its assistance to Governments in various aspects of pre-disaster planning, preparedness and mitigation as they affect human settlements. In the area of seismic disasters, a scientific and technical report on post-earthquake reconstruction of human settlements in northern Armenia and follow-up recommendations as to appropriate measures to be taken in order to mitigate the effects of future telluric activity in the region has been prepared and submitted to the Government of the Soviet Union. A video film and a publication on mitigation of the effects of earthquakes on human settlements, containing the proceedings of a symposium held at Tbilisi (Georgian SSR) is being prepared for world-wide distribution. Upon the request of the Government of the Philippines, Habitat has assisted in the formulation of recommendations on the reconstruction of the earthquake-affected areas of the country. In central and eastern Nepal, Habitat is assisting the Government in enhancing the institutional capacity of the Ministry of Housing and Physical Planning to formulate, managing and monitoring reconstruction and rehabilitation programmes of houses, hospitals and basic infrastructure in the earthquake-affected areas of Nepal. In the Guilan and Zanjan provinces of Iran, the Centre is providing immediate technical assistance to post-earthquake reconstruction and rehabilitation, and is assisting with coordination of the mobilization and channelling of international contributions and assistance. The assistance also includes elements to enhance the Government's long-term disaster mitigation programme.

73. As regards floods, a rehabilitation and reconstruction programme for flood-damaged areas in Kashur Tehsil in the Punjab Province of Pakistan is in progress and is intended to serve as a model for demonstration and replication. Covering nearly the whole of Bangladesh, a reconstruction programme for rural housing in flood-affected areas has been set up in order to improve the supply, delivery and durability of building materials and techniques, and to identify proven, replicable housing delivery systems and programmes that are flood-mitigating and will form part of a national rural housing strategy. Following the devastations caused by Typhoon (No. 6) Irving, Habitat provided assistance to Viet Nam to develop and apply training materials and appropriate low-cost disaster-resistant building techniques. In the area of information dissemination, the Centre is currently preparing a manual on planning and management for disaster reduction.

IV. ORGANIZATIONAL AND FINANCIAL ARRANGEMENTS

The role of the Decade secretariat

74. The secretariat functions as catalyst, coordinator, stimulator, adviser and facilitator within the Decade community. Its main tasks include making contact with the various constituencies involved in Decade activities, organizing and participating in meetings and providing the necessary substantive and secretarial assistance to the other organizational elements established by the Decade, namely, the Special High-Level Council and the Scientific and Technical Committee. The secretariat is therefore seen as a centre for information and coordination, whereas operational responsibilities lie with Governments, UNDRO and other organizations of the United Nations system and other participants in the Decade, as requested by the General Assembly.

75. As seen in preceding paragraphs, the Rome Think Tank, the Inter-Agency Working Group and finally the Scientific and Technical Committee have all paid particular attention to ways and means of involving all potential participants in the activities of the Decade and come up with numerous proposals and recommendations, including many related to a much more active involvement of the private sector and particularly the insurance and financial institutions. In consultation with the Scientific and Technical Committee and in cooperation with UNDRO and other organizations of the United Nations system, the secretariat intends to pursue these avenues with a view to the full involvement of all interested parties in the Decade activities.

Trust fund

76. In its resolution 44/236, the General Assembly recommended that extrabudgetary resources be provided for implementation of Decade activities and therefore that voluntary contributions from Governments, international organizations and other sources, including the private sector, be strongly encouraged. To this end, it requested the Secretary-General to establish a trust fund, entrusted to his administration.

77. For implementation of Decade activities (in addition to national contributions), the situation of the fund is far from satisfactory. In 1990, a major contribution of $450,000 was received from Italy and the Government of France also made a contribution to the trust fund. A major contribution of a project character was received from the Federal Republic of Germany, as were some smaller project contributions from other countries. In 1991, a contribution of $408,000 was provided by Finland. In addition, Japan contributed $500,000 to the Human Resources Development Fund of UNDP for disaster mitigation activities in connection with the Decade.

78. In addition, support has been received from the United States of America through the financing in the amount of $350,000 of the secondment of a senior staff member to the secretariat. Likewise, WMO has assigned a senior staff member to assist the secretariat on a part-time basis and in 1990 also provided a consultant. WHO has also made available a staff member to assist on a part-time basis.

79. Clearly, urgent action is necessary if the trust fund is to support the activities of the Decade and the organizational units such as the Special High-Level Council, the Scientific and Technical Committee and the secretariat of the Decade.

V. CONCLUSIONS

80. It can be observed that in the period under review Member States have continued to gear up for the Decade, awareness of potential mitigation has increased as a result of workshops, topical activities and consultations, and United Nations agencies and non-governmental organizations, particularly those in the scientific sector, have engaged in serious efforts to develop projects and activities leading to improvement of the capacity to monitor hazards, with the ultimate objective of reducing vulnerability.

81. Some important tasks that lie ahead include:

(a) Study of the economics of disaster management, in particular a cost/benefit analysis of disaster mitigation;

(b) Integration of disaster vulnerability assessment in the national development process, with a view to ensuring that future investments and projects do not add to the overall vulnerability level, but on the contrary assist in reducing society's exposure to hazards;

(c) Commitment of new resources or programming of existing ones in such a way that disaster mitigation, once it has been recognized as a policy priority, also becomes a priority for implementation.

82. In order to achieve progress in the above areas towards the goals of reducing the number of victims and the damaging impact of disasters, continuing interaction with and support for national Committees for the Decade

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will be required. As this is certainly a priority concern for implementation of the Decade, efforts will be made to enhance the support provided to national mitigation policies, through assistance to the national committees.

83. The demonstration projects that have been identified by the Scientific and Technical Committee constitute, in the context of the framework programme, a considerable body of disaster mitigation activities with an important potential for disaster vulnerability. It is now essential that, as specifically recommended by the General Assembly in paragraph 13 of the International Framework of Action for the Decade, they be taken into account in bilateral and multilateral cooperation; this is a necessary step in order to translate policy recommendations into actual activities having an effect on the reduction of mankind's exposure to natural disasters.

84. A major effort must be undertaken to implement a public information and education strategy for the Decade. In this early phase, the potential benefits of disaster mitigation must be explained and emphasized to inform adequately public opinion, policy makers and operational authorities of the possible ways and means to participate in the world wide effort to reduce losses of lives, material damage and economic disruption during the 1990s.

Annex

List of addresses of national committees and/or focal points

(As at 3 June 1991)

Mr. Dastagir Sadaqui
President
Office of Disaster Preparedness
Council of Ministers
Kabul
Republic of Afghanistan

Comité National des Risques Majeurs
Direction Générale de la Protection Civile
Ministère de l'Intérieur
Alger
Algérie

Mr. John DeNully
Chairman
National Disasters Services
American Road, St. John's
Antigua

Commodore C.J. Littleton, RAN
Director-General
Natural Disasters Organization
Department of Defence
P.O. Box E33
Queen Victoria Terrace
Canberra, ACT 2600
Australia

Prof. Dr. S.J. Bauer
Chairman, Austrian National Committee
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c/o Osterreichische Akademie der
Wissenschaften
Dr. Ignaz-Seipel-Platz 2
A-1010 Wien
Austria

Dr. E. Kussbach
Minister
Austrian Ministry for Foreign Affairs
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Ballhausplatz 2
A-1014 Vienna
Austria

Hon. Sir Clement T. Maynard
Deputy Prime Minister
Chairman, National IDNDR Committee
P.O. Box N 3701
Nassau
Bahamas

Mr. Abdul Rahman Al Khalifa
Focal point for disaster relief
Director
Civil Defence and Fire Brigade
Ministry of Interior
P.O. Box 13
Manama
Bahrain

National Disaster Prevention Council
Ministry for Relief and Rehabilitation
Building No.4
Bangladesh Secretariat
Dhaka
Bangladesh

National IDNDR Committee
Académie Royale des Sciences,
Lettres et Beaux-Arts
Bruxelles
Belgium

National Office of Emergency Management
Mr. Henry Gordon
The Permanent Secretary
Prime Minister's Office
Belize City
Belize

Mr. Tshering Tashi
Head of National Environmental
Secretariat
Planning Commission
Thimphu
Bhutan

Eng. Sr. Adolfo Vargas
President
Bolivian National Committee for IDNDR
P.O. Box 11253
La Paz
Bolivia

The Department of Welfare, Youth
and Sport
Bandar Seri Begawan
Brunei Darussalam

Dr. M. Brainov, Vias
c/o Union des Travailleurs
Scientifiques de Bulgarie
1504 Sofia
Rue Oborichte
Bulgaria

Commission nationale de lutte
contre les effets de la sécheresse
Focal point for IDNDR
Burkina Faso

Dr. Alan Davenport
Chairman, Committee for IDNDR
Boundary Layer Wind Tunnel Lab.
University of Western Ontario
Faculty of Engineering Science
London, Ontario N6A 5B9
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Colonel Didace N'Dayen
Président du Comité national de lutte
contre l'incendie, le feu de
brousse et autres calamités
B.P. 1859
Bangui
République centrafricaine

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Chairman, National IDNDR Committee
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Ciencias Fisicas y Matematicas
Departmento de Geologia y Geofisica
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Mr. Chen Hong
Director, Dept. of Natural
Disaster Relief
Ministry of Civil Affairs
No.9 Xi Huang Chen Gen Nan Jie
Beijing
China

Mr. Camilo Cardenas Giraldo
Chief, National Office for
Disaster Assistance
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Comisión Nacional de Emergencia
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Mr. Jose Angel Llanes Guerra
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Oficina de Desastres
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National Disaster Co-ordinator
Prime Minister's Office
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Office of the Civil Defence
Focal Point for IDNDR activities
Via the Technical Secretariat
of the Presidency/ONAPLAN
Santo Domingo
Dominican Republic

National Civil Defence Directorate
Quito
Ecuador

The Academy for Scientific
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Focal Point for IDNDR
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Mr. P. Myllyniemi
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Chief Director
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Mr. R.C. Chowdhury
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Office of the Minister Co-ordinator
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Jl, Medan Merdeka Barat 3
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UNITED
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General Assembly
Economic and Social Council

Distr.
GENERAL

A/46/266/Add.1
E/1991/106/Add.1
16 October 1991

ORIGINAL: ENGLISH

GENERAL ASSEMBLY
Forty-sixth session
Agenda item 83

ECONOMIC AND SOCIAL COUNCIL
Second regular session
of 1991

INTERNATIONAL DECADE FOR NATURAL DISASTER REDUCTION

Report of the Secretary-General

Addendum

As announced in the report of the Secretary-General on the International Decade for Natural Disaster Reduction (A/46/266), this addendum contains up-to-date information on activities being implemented in the context of the Decade and also presents to the General Assembly the New York Declaration of the Special High-Level Council and the first annual report of the Scientific and Technical Committee on the Decade, called for in Assembly resolution 44/236.

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I. INTRODUCTION

1. In addition to the information contained in the main report on the International Decade for Natural Disaster Reduction (A/46/266), several important developments have taken place in recent months. The Secretary-General has completed the establishment of the international mechanism that had been envisaged in General Assembly resolution 44/236 with the creation of the Special High-Level Council. The Scientific and Technical Committee has held its second session of 1991 and has developed overall programmes for the Decade as requested by the General Assembly. The implementation of disaster-reduction activities, which have been initiated as a result of the launching of the Decade, has begun in some cases. A number of weaknesses have also been identified and the attention of the General Assembly, in conclusion, is called to several important points.

II. INTERNATIONAL FRAMEWORK OF ACTION FOR THE DECADE

A. The Special High-Level Council

2. The Special High-Level Council held its inaugural meeting at United Nations Headquarters on 9 and 10 October 1991 to coincide with the celebration of the International Day for Natural Disaster Reduction. The Council's membership comprises Prime Minister M. Eugenia Charles of Dominica, H.R.H. Princess Chulabhorn Mahidol of Thailand, former Prime Minister Takeo Fukuda of Japan, former President Miguel de la Madrid Hurtado of Mexico, Mrs. Suzanne Mubarek of the Arab Republic of Egypt, Mr. Idé Oumarou of Niger, Mrs. Lisbet Palme of Sweden, Mrs. Marilyn Quayle of the United States of America, Mr. Janez Stanovnik of Yugoslavia and Academician M. Ch. Zalikhanov of the Soviet Union. It is expected that these distinguished leaders will contribute greatly to the promotion of public awareness and to the mobilization of much-needed public and private support for the reduction of international and national vulnerability to natural disasters. The inaugural meeting, which was made possible thanks to the financial support of Japan, underlined the potential gains in disaster mitigation that can be brought about if this issue reaches a level of visibility commensurate with the impact of the loss of lives and the material damage caused by disasters. To this end, the Special High-Level Council has adopted, as the outcome of its first meeting, the New York Declaration of 10 October 1991, which is presented as annex I.

B. The Scientific and Technical Committee

3. On the basis of the review by the Scientific and Technical Committee of national activities and needs and of international scientific and technical undertakings designed to reduce losses from natural disasters, six actions are proposed by the Committee for consideration by the General Assembly. These appear in paragraph 6 of the executive summary of the first annual report of

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the Committee which is contained in annex II below. The Committee developed overall programmes for the Decade comprising targets for progress in disaster mitigation, the programme framework, review of national gaps and priorities and a number of illustrative projects.

C. National disaster-mitigation measures

4. The importance of the policy measures for disaster reduction to be taken at the national level was emphasized by the Assembly in resolution 44/236 and has since been confirmed by impressive developments in the establishment of national committees or focal points for the Decade, about 100 to date, and by the disaster-mitigation measures and projects that have been proposed or are being developed and implemented in concerned countries. Some of them are quite innovative and provide good examples of the transfer and application to disaster mitigation of advanced scientific knowledge and technological know-how that constitute the central concept of the Decade.

5. National committees responded with strong interest to the opportunity provided by the regional meeting of Latin American countries, organized by the World Health Organization and the Pan American Health Organization. In this light, further regional and subregional meetings should be encouraged and should also be an important part of the preparatory process for a world conference of national committees for the Decade, which had already been envisaged by the International Ad Hoc Group of Experts on the Decade (see A/44/322/Add.1) and which the Committee now recommends. The Secretary-General considers that such a world meeting of national committees, if well prepared, could achieve the broad intersectoral participation which is a characteristic feature of the the Decade, and could be an event of great importance to assess the progress made in disaster-mitigation policies and activities. It could also provide important information in the context of the mid-term review of the Decade, which the Assembly has scheduled for 1994.

III. FINANCIAL AND ADMINISTRATIVE ASPECTS

6. The Decade secretariat is currently composed of two full-time Professional and two General Service staff members, who have been assisted by short-term consultants for the preparations for the Special High-Level Council and Scientific and Technical Committee meetings. All have been supported by voluntary contributions. It is expected that an economist will join the staff towards the end of the year, and discussions are under way with potential donors to contribute to essential work to be undertaken in support of national committees and to provide an expert in earthquake engineering to work on substantive aspects of programme development.

7. Concerning the Trust Fund for the Decade, the Secretary-General reiterates that urgent action is needed if the bodies making up the international mechanism of the Decade are to function in a regular manner, which is essential if the important activities of the Decade are to continue

as envisaged by the Assembly. For instance, the meetings of the Scientific and Technical Committee and the Special High-Level Council have been made possible by ad hoc grants from Germany and Japan. It is evident that activities can be planned and executed on a well-organized basis only if sufficient resources are made available in a timely and sustained manner.

ANNEX I

10 October 1991

Dear Mr. Secretary-General,

I have the honour of transmitting to you the New York Declaration which was adopted by the Special High-Level Council of the International Decade for Natural Disaster Reduction at its inaugural session (9-10 October 1991).

On behalf of the Council, I request that this Declaration be brought to the attention of the General Assembly, in view of the forthcoming discussion on the Decade.

I would also like to express the Council's and my personal appreciation for the support you have extended to us on this occasion.

Please accept, Mr. Secretary-General, my highest consideration.

(Signed) Miguel de la MADRID HURTADO
Chairman
Special High-Level Council for
the International Decade for
Natural Disaster Reduction

Mr. Javier Pérez de Cuéllar
Secretary-General
United Nations
New York

APPENDIX

New York Declaration of the Special High-Level Council

The Special High-Level Council of the International Decade for Natural Disaster Reduction held its inaugural session at United Nations Headquarters in New York on 9 and 10 October 1991 to undertake its role to advise the Secretary-General, promote awareness and mobilize resources for the Decade.

The Council considered that:

Whereas the peoples and countries of the world are afflicted by recurring natural disasters that cause enormous loss of life, set back economic and social development, and affect the political stability of nations;

Whereas the scientific, technical educational, social and political resources exist to greatly reduce the human and economic losses from natural disasters and have been successfully applied in some countries;

Whereas many countries that have not implemented natural disaster-mitigation measures are beginning to take steps to reduce their vulnerability under the auspices of the International Decade for Natural Disaster Reduction; and

Whereas the Special High-Level Council for the Decade has been appointed by the Secretary-General at the request of the General Assembly to advise on actions to mitigate the impacts of natural disasters;

The Council concluded that:

Proclamation of the International Decade for Natural Disaster Reduction offers an extraordinary opportunity to reduce the impact of natural disasters, provided that the possibility to confront hazards through enhanced awareness, preparedness and preventive actions is recognized world wide and adequate resources are directed towards this goal.

Reducing vulnerability to natural disasters is a major goal requiring concerted and coordinated efforts of Governments, the organizations of the United Nations system, the world's scientific and technical community, volunteer organizations, schools and educational institutions, the private sector, the media and individuals at risk. Vulernability assessment and early warning of potential disasters and effective communication to the public are essential.

Developing countries and highly vulnerable groups, especially children, should be given the greatest priority in disaster-mitigation activities, including actions to address the psychological effects of disasters. Among the means for accomplishing this goal are locating and constructing housing, infrastructure, schools and hospitals to avoid and resist hazards, educating

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students for self-protection and using the media to reach the vulnerable population.

Mitigation actions related to natural disasters should be linked with similar actions in dealing with man-made and environmental disasters.

The Council called upon:

All current and potential participants in disaster-mitigation efforts, including resources from academia, volunteer organizations, and commerce and industry, as well as Governments, to contribute to reducing disaster vulnerability.

Countries to form national committees for the Decade, including high-level representatives of planning and development agencies, scientific and technical groups, volunteer organizations, the private sector, and the media; and to provide committees with the means to stimulate and coordinate national disaster-mitigation activities.

All countries to recognize the importance of incorporating natural disaster activities within plans to achieve sustainable development and to undertake actions to reduce vulnerabilities through the application of disaster-mitigation strategies. This policy should be brought to the attention of the United Nations Conference on Environment and Development, to be held in June 1992.

The national, regional and international developmental and financial organizations, as well as the private sector and the media, to give high priority to requests for assistance in reducing natural disaster vulnerabilities.

Countries having disaster-mitigation resources to aid those needing assistance by strengthening local and national capabilities, developing human resources and supporting the institutions of the Decade, particularly by providing the resources necessary to support the functions of the Decade secretariat and to make possible the information and public awareness activities of the Decade.

The Council decided to:

Endorse the work of the Scientific and Technical Committee, particularly the outcome of its Guatemala meeting as reflected in its first annual report to the Secretary-General, including the targets identified for the Decade.

Pursue the full involvement of private and public business sectors in view of their inherent vitality and potential for reducing the impact on the socio-economic systems of vulnerable countries by limiting the disruption of productive activities and accelerating the restoration of essential services and the generation of income for the affected population, particularly for developing countries.

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Suggest that the General Assembly endorse bringing together representatives of national committees in a world conference on natural disaster reduction in 1994, which would contribute to the mid-term review of the Decade.

Meet at least annually to vigorously pursue its responsibilities for the Decade, and at its next session to focus on improvement of capabilities at the national level, particularly human resources, increased involvement of the media and the private sector, development of incentives for natural disaster mitigation and international coordination.

Undertake individual activities on behalf of the Decade at the regional, subregional and national levels, particularly in increasing public awareness of natural hazards and in mobilizing resources and stimulating political support for disaster-mitigation strategies.

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ANNEX II

First annual report of the Scientific and Technical Committee to the Secretary-General

SUMMARY

1. In its resolution 44/236 of 1989, the General Assembly called attention to the losses from natural disasters and proclaimed the International Decade for Natural Disaster Reduction to respond to an issue of rapidly growing significance to the peoples and countries of the world. The importance of this initiative was again tragically demonstrated in 1990 and 1991, the first two years of the Decade, by the devastating effects of tropical cyclones, volcanic eruptions, earthquakes, droughts and desertification. In 1990 alone, natural disasters caused economic losses of $47 billion. "Loss burdens from natural disasters are increasingly dramatically: from the 1960s to the 1980s economic losses have virtually tripled, and insured losses have quintupled" (Munich Re-insurance Company). It is increasingly evident that for many countries the reduction of disaster losses is vital to sustainable development.

2. While many Governments and international organizations have long had programmes in disaster prevention, warning and preparedness, the Decade has been a successful means for stimulating more initiatives both nationally and internationally, and for mobilizing the scientific and technical community to concentrate on the topic.

3. The General Assembly charged the Scientific and Technical Committee on the Decade with developing overall programmes to reduce losses from natural disasters. To this end, the Committee herein recommends targets and a programme framework.

4. Recognizing that many of the disaster-mitigation actions are implemented by countries, the Assembly specifically requested that priorities and gaps in technical knowledge identified by national committees, which are the main mechanism for implementing the Decade, be taken into account in developing overall programmes.

5. In this regard, the Committee has determined that the most important Decade need is developing and strengthening national capacities to undertake mitigation strategies within the national development process that reduce the impact of natural hazards. It is recognized that some of these hazards are affected by human activities. Assistance is sought by countries, particularly to assess hazard vulnerabilities and to initiate and implement mitigation strategies.

6. Based on this assessment, the Committee recommends to the Secretary-General that he bring to the attention of the General Assembly the following six specific actions, which could lead to cutting the loss in lives from natural disasters by the end of this century to a fraction of its current

rate, and could establish a much improved basis for social and economic development:

(a) Endorse the targets adopted by the Committee for the Decade, which are:

> By the year 2000 all countries, as part of their plan to achieve sustainable development, should have in place:
>
> > Comprehensive national assessments of risks from natural hazards, with these assessments taken into account in development plans.
> >
> > Mitigation plans at national and/or local levels, involving long-term prevention and preparedness and community awareness.
> >
> > Ready access to global, regional, national and local warning systems and broad dissemination of warnings.

(b) Recognize disaster prevention, warning and preparedness as integral parts of national planning for sustainable development. This concept should be explicitly recognized by the United Nations Conference on Environment and Development, to be held at Rio de Janeiro in June 1992.

(c) Encourage establishment of broadly based national committees in all countries without such bodies, and urge that these committees include representatives of agencies responsible for planning and economic development.

(d) Urge countries to contribute to disaster-reduction activities nationally and internationally, through bilateral and multilateral programmes, including the Trust Fund for the Decade. The activities of the Decade carried out by a small secretariat, the Scientific and Technical Committee and the Special High-Level Council have been supported up to now irregularly by special ear-marked contributions from a few donor countries. Sustained support is now essential as the information strategy and other activities of the Decade must be supported on a firm, continuing basis by a fund of $3 million per year for the remaining eight years. Requests for assistance from developing countries should be encouraged and donor countries should be urged to give priority attention to the requests.

(e) Encourage broad participation and support for a world conference of representatives of national committees and other participants in the Decade planned for 1994 as a key element in the mid-term review called for in resolution 44/236.

(f) Re-emphasize the importance of natural disasters in programmes of the United Nations system where appropriate, for example, in development and environment programmes. Funds to support national projects, the work of the national committees and international scientific and technical projects could be obtained through relatively modest shifts in development assistance, allocations from existing environmental and related funds, such as the Global Environmental Facility, and budgets of national and international agencies.

7. The General Assembly may wish to consider adopting a resolution or resolutions concerning these matters.

8. To accomplish the objective and goals of the Decade, the Committee has adopted a programme framework of seven strategies, as follows:
(a) identification of hazard zones and hazard assessment; (b) vulnerability and risk assessment, cost/benefit analysis; (c) awareness at level of decision and policy makers; (d) monitoring, prediction and warning; (e) long-term preventive measures; (f) short-term protective measures and preparedness; and (g) early intervention measures. These activities require supporting actions in five associated areas: (a) education and training of local and national specialists; (b) public education and information; (c) transfer of appropriate technology; (d) application of proven technology; and (e) formulation and adoption of appropriate policies.

9. In the implementation of these strategies, the Committee has assigned highest priority to support for national committees, in part through provision of technical and other information, through regional meetings, activities and centres and through the preparation of a world conference. Of particular importance is the development of human resources at the national level in developing countries. Additional priorities of the Committee for 1992-1993 follow in the introduction.

I. INTRODUCTION

10. The major natural disasters of the first two years of the Decade - the earthquake in Iran, the tropical cyclone in Bangladesh, with its enormous loss of life, the extra-tropical cyclones in Europe, the volcanic eruptions in the Philippines and Japan, and the floods in China, plus the destructive earthquake in Guatemala during the second session of the Scientific and Technical Committee - again demonstrate the vulnerability that many countries face to natural disasters.

11. In 1990, natural disasters caused economic losses $US 47 billion. In the last 20 years, natural disasters have cost the lives of some 3 million people and affected at least 800 million human beings. Repeatedly, hard-won economic development is set back years by natural hazards, such as earthquakes, windstorms, floods, droughts and desertification, the occurrences and effects of which can generally be anticipated. Yet, the scientific and technical means exist to reduce these awful losses substantially. Such is the message and the mandate of the Decade.

12. Disaster prevention and preparedness is an essential part of sustainable development. It is wasteful not to integrate disaster preparedness into development planning. Prevention of disasters together with preparedness not

only minimizes damage but promotes a stable environment, incentives for investment and enterprises, and the sense that people can control their own economic destiny - factors crucial for sustainable long-term development.

13. The Decade was launched by General Assembly resolution 44/236 with the objective "to reduce through concerted international action, especially in developing countries, the loss of life, property damage, and social and economic disruption caused by natural disasters, such as earthquakes, windstorms, tsunamis, floods, landslides, volcanic eruptions, wildfires, grasshopper and locust infestations, drought and desertification and other calamities of natural origin". In close relation to natural hazards, human actions not only cause many natural disasters, through activities such as deforestation, overgrazing, and careless use of fire, but also increase the vulnerability to damage through urbanization, population growth, and poor facility siting. Natural hazards addressed in the Decade are also closely related to environmental issues such as climate change, deforestation, air and water pollution, and biodiversity. Changing climate, for example, may well affect occurrence of future disasters such as inundations from rising sea level, and drought.

14. The first annual report of the Scientific and Technical Committee is an important one in that it establishes targets, a programme framework, an information strategy and criteria for project identification for the Decade. It also presents an overview of country priorities and gaps in technical knowledge, and identifies several international demonstration projects that exemplify the objective and goals of the Decade.

15. The recommendations in the present report were derived from a sequence of meetings and discussions that involved not only the members of the Committee, but also representatives of national committees, organizations in the United Nations system and non-governmental organizations. Some of the key events were a conference in Japan, September 1990; a planning meeting at Castelnuovo di Porto (Italy), November 1990; the first session of the Scientific and Technical Committee at Bonn, March 1991; the Interagency Working Group and Steering Committee meetings at Geneva, July 1991; and the Meeting of Latin American Countries on the Decade, 9-13 September 1991, and the second session of the Scientific and Technical Committee, 16-20 September 1991, both at Guatemala City.

16. Looking ahead, the Committee has selected several priorities for its efforts during 1992-1993, in addition to the highest priority of building national capabilities. They are to:

(a) Continue development of the overall programme of the Decade and encourage support for national and international projects;

(b) Implement the public information strategy;

(c) Identify and promote resources to support national and international disaster-mitigation activities within the Decade;

(d) Establish systems for quantitative measurement of progress and benefits in achieving the targets of the Decade;

(e) Assist in the development, compilation and dissemination of guidelines for comprehensive risk assessment and mapping methods;

(f) Contribute to the development of databases on natural disasters and on prevention, mitigation, warning and preparedness systems;

(g) Encourage advancement of scientific and technical research as a basis for mitigation actions and dissemination of research results;

(h) Identify additional channels and methods for further involving the scientific community and the private sector in realizing Decade goals, as specifically called for in resolution 44/236;

(i) Assist in preparing for the mid-term review of the Decade in 1994, including the world conference on natural disaster reduction.

II. LESSONS FROM RECENT DISASTERS

17. It is only by observing actual disasters, what they do to people, where and how, that one can design ways for reducing their effects. Each disaster brings a lesson, pointing to weaknesses in prevention or preparedness, suggesting improvements or serving as a test of present reduction measures. Hence, the importance of case studies.

18. Some recent natural disasters provide effective examples.

19. When the Pinatubo volcano awoke in the Philippines, it took 500 lives, while under more unfortunate circumstances it could have killed tens of thousands. This saving of lives was due to the use of adequate technology for monitoring the volcano, together with a warning and communication system which allowed for the evacuation of 80,000 persons directly threatened. The Pinatubo eruption was one of the largest this century and was unusual in that it coincided with the passage of a tropical cyclone. Because of prompt investigative actions by national and foreign scientists following the first signs of unrest, the types of activity and magnitude of the cataclysmic eruption were accurately predicted. The main lesson is that all potentially dangerous volcanoes, including long-dormant ones, should be properly investigated and monitored to ensure that future emergencies will be adequately foreseen and managed.

20. In the case of Mount Unzen in Japan, the protracted eruption process required sudden and repeated evacuations of the community, which tested the adaptability of the administrative system and the response of the population over an excruciatingly long period of time. It was seen that non-resident and newly settled people are especially vulnerable to the effects of disasters due to lack of knowledge of the local culture. Increasing urbanization could

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aggravate such situations. These lessons will be useful for pre-disaster planning for other similar situations in the future, not only in Japan but also in other vulnerable areas.

21. In Bangladesh, the study of the recent tropical cyclone with floods from storm surge has indicated how credible warnings and education of the population, combined with the provision of accessible shelters in sufficient numbers, could have saved a large proportion of the estimated 200,000 deaths.

22. In China, exactly 60 years ago, over 1 million people were drowned in the Yellow River floods. This year's floods, affecting a highly populated area of 220 million people, damaged and collapsed some 9 million houses and caused direct economic losses of $2 billion to $16 billion, while the death toll amounted to 3,074. The reasons for this very low fatality rate should be carefully scrutinized, for it could shed light on the respective effectiveness of the various preventive and mitigation measures implemented beforehand. Information was presented to the Committee showing that in China a direct, quantifiable relation was found between flooding of farmland and farm production in succeeding years.

23. The continuing disasters resulting from drought and desertification in several areas reflect the inherent vulnerabilities of the societies in which they occur. To that extent, such disasters can best be prevented through adoption of long-term policies related to various aspects of development. While such a commitment may exist in some countries, the amount of resources and time required to significantly reduce these vulnerabilities is considerable. In the meantime, efforts should be linked with long-term disaster prevention programmes and disaster preparedness measures.

24. Preventive and mitigation measures are multidisciplinary by nature, from technological to social ones, and from antiseismic building and warning using satellite remote sensing to training for self-rescue and education of the community. These measures have to be combined according to the type of hazard and the vulnerability of the area. They should also be appropriate to the local political, cultural, economic, developmental and environmental context. Therefore, the Committee stresses the crucial importance of learning from past disasters in order to draw lessons for future disasters with respect to all aspects of a national socio-economic system.

25. The Committee emphasizes the value of reviewing post-disaster information, especially to examine the direct consequences of disasters on the population and on economic output. The Committee encourages statistical studies of these impacts and the quantification of their consequences on national economies. Altogether, review of disaster cases shows that efforts should be concentrated in: awareness - educating both the general public and the leadership community to the natural hazards that endanger them; taking action before disasters strike - reducing vulnerability through mitigation techniques, rather than focusing assistance on a post-disaster basis; cooperation - learning from successful mitigation activities throughout the world and applying these lessons learned in areas that are vulnerable to

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similar hazards. Such an integrated approach - which may be called the ABC programme (Awareness Before disasters Cooperation) - will, over the Decade, significantly improve disaster resistance throughout the world.

26. As a final point, the Committee noted the compounding of economic consequences of disasters and the effects induced (direct and secondary losses) that could double or triple the overall costs of disasters. In addition, psychological effects increase the consequences of the disasters on socio-economic development by reducing working capacities, discouraging the spirit of enterprise and by reducing the coping ability of the affected population.

III. PRIORITIES AND GAPS IN TECHNICAL KNOWLEDGE IDENTIFIED AT THE NATIONAL LEVEL

27. Resolution 44/236 requested that the Committee develop overall programmes for the Decade, taking into account priorities and gaps in technical knowledge identified at the national level, particularly by national committees. Such priorities and gaps would provide guidance in multilateral and bilateral technical assistance programmes.

28. The Committee reviewed the submissions received from countries in response to a request from the secretariat. The nature of the replies covered a broad range, which reflects the diversity of vulnerabilities to natural hazards among countries and their progress in dealing with them. In some cases preparation of the submissions stimulated the designation of a national committee or focal point and the initiation of the Decade planning process. In other cases, countries that were already well under way provided comprehensive plans for their Decade activities.

29. The most important need identified at the national level was for the development and strengthening of capacities to undertake national mitigation strategies designed to reduce the impact of disasters. In this connection, there exists a critical need for additional human resources, which can only be developed through training programmes. The conference of Latin American countries on the Decade, held at Guatemala City from 9 to 13 September 1991, specifically identified lack of human resources as a major gap, and the development of such resources as a high priority for natural disaster reduction. Other countries such as Angola, China, Indonesia, Morocco, Mozambique, Thailand and Viet Nam cited as a priority, in their replies, the establishment of a national office or centre having the role and means to develop and implement a systematic disaster-reduction policy.

30. Another critical gap cited by several countries was assessment and mapping of those natural hazards from which a country has suffered in the past and the development of vulnerability scenarios for future events. Only a few developing countries have already accomplished this. Consultations are sought to assist in this regard.

31. Several other needs commonly mentioned were for:

(a) Information, education and training to facilitate planning, technology transfer and implementation;

(b) Improved monitoring and warning systems;

(c) Better application of mitigation measures, such as improved building codes and construction guides;

(d) Better preparedness plans;

(e) More resources to impement programme plans.

32. Altogether, many countries are ready to move ahead with implementation or programme plans, and others will soon be ready. Countries that have projects well under way are commended for their efforts. For example, the Philippines, Trinidad and Tobago, Turkey and the United States of America have developed comprehensive disaster-mitigation plans.

33. A complete listing of the countries that have provided information on their priorities and gaps to date is given in appendix II.

34. For some developing countries, assistance in identifying priorities and gaps is very much needed at this stage in the decade. It would be helpful, therefore, to promote bilateral and multilateral contacts to assist developing countries in participating and benefiting fully from the Decade. Conversely, some developed countries have indicated their availability to assist with the application of existing advanced technologies to disaster reduction. Such a linkage of interests could be facilitated by funds provided through the Trust Fund for the Decade, in addition to meeting the organizational needs for national planning efforts. Guidance material should be made available to developing countries for identifying and preparing national- and regional-level project proposals. The contribution of members of the Committee in this regard, where appropriate, could be most beneficial. In addition, the secretariat could facilitate this process by providing guidelines for setting up national committees, references to important policy documents, and brochures on various subjects, including learning from disasters.

35. As a starting-point for countries that still need to launch the process of developing a plan for the Decade, national committees should prepare basic disaster analyses that represent the greatest future risks, and determine the extent to which available disaster-reduction measures have been taken. Such scenarios would help to focus attention on future priorities and to set targets for national programmes during the Decade. Subsequently, and in selected disaster-vulnerable countries, a methdology could be applied, with support of the United Nations system, to stimulate and enable initial, intermediate and final assessments of the extent to which the Decade's targets are being met through improved and systematic risk assessment and disaster-mitigation programmes. The programmes could include:

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(a) Preparation of disaster scenarios for major potential natural hazards in each country so as to establish the gaps, needs and priorities;

(b) Compilation of guides on natural hazard assessment and mapping as well as vulnerability and risk assessment, to bring out the nature and extent of data required, and the needs of monitoring in the future;

(c) Application of successful drought-management strategies and dissemination of suitable examples;

(d) Compilation of simple methods of building construction so as to protect against floods, tropical cyclones and earthquakes, and preparation of do-it-yourself brochures, pamphlets and charts;

(e) Preparation of model training modules, initially using existing material from the United Nations system and other international and regional organizations, for policy makers/planners/disaster managers, which could be adopted by different countries to suit their systems of planning, governance and management.

36. In conclusion, both the limited number of substantive answers received and the general and preliminary nature of most planned activities indicate the pressing need to provide guidance and assistance to the national committees. Therefore, the Committee recommends making available to national committees and focal points consultative facilities at the international level to be drawn on in case of need. Arrangements for such consultative services might be made under the auspices of the Decade secretariat, making extensive use, _inter alia_, of the experiences and capacities of individual members of the Committee.

IV. OVERALL PROGRAMME

A. _Targets_

37. The general objective or target of the International Decade for National Disaster Reduction is the reduction of human and economic losses resulting from the occurrence of natural hazards. Post-disaster studies have convincingly demonstrated that certain actions taken prior to the occurrence of a natural hazard are cost-effective to attain this general objective. Thus, one way to assess progress is to evaluate the application of proven loss-reduction practices.

38. The specific targets committee considers that the setting of specific objectives or targets should provide a measure of progress to be used, not just at the mid-term and conclusion of the Decade, but on a regular basis. The responsibility to implement disaster-reduction measures rests largely at the national level; consequently, most of the recommended targets will be national or local targets.

39. Disaster-reduction practices prior to the occurrence of a natural hazard involve three broad areas:

(a) Assessment of risks: an evaluation of the hazards and vulnerabilities and the use of this information in decision-making;

(b) Short- and long-term preventive measures;

(c) Warning: short-term prediction and communication to avert or minimize hazardous impacts.

40. Specific targets to be achieved by the year 2000 are proposed as part of national plans for sustainable development. Clearly, each country will need to select its own targets according to its risk and vulnerability to disasters, level of economic development, and other special characteristics. Targets applicable to a rural country mainly affected by locust infestations and droughts will be distinct from those with large metropolitan areas exposed to the risk of earthquakes.

41. As targets, by the year 2000, all countries, as part of their plan to achieve sustainable development, should have in place:

(a) Comprehensive national assessments of risks from natural hazards, with these assessments taken into account in development plans;

(i) All natural hazards posing a disaster risk should be identified and brought to the attention of decision makers, using standardized methodology, symbols and terminology for risk mapping. Areas should be classified according to their level of exposure to each type of natural disaster;

(b) Mitigation plans at national and/or local levels, involving long-term prevention and preparedness and community awareness;

(i) Legislative authorities at national, state or local level should establish the necessary legal framework for the implementation of mitigation measures, such as land-use planning, water and forest management and building codes. Authorities should keep in mind that laws and codes that are not enforced are of little benefit;

(ii) National, state or local institutions responsible for the planning of general socio-economic development and infrastructure, the private sector and bilateral or multilateral development agencies all should give due consideration to the level of risk to natural hazards at the earlier stages of their decision-making process;

(iii) Cost-effective measures to prevent the occurrence or recurrence of avoidable natural hazards (for example, in the case of floods, landslides, forest fires, etc.) should receive from the national and bilateral or multilateral agencies priority consideration for funding and implementation;

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(iv) Academic institutions and professional schools in disciplines such as engineering, agriculture, architecture, planning, business or public administration should include in their curricula locally applicable disaster-reduction concepts and measures;

(v) National, state or provincial, and local authorities should develop, periodically test and update emergency plans to provide preparedness assistance promptly and efficiently in case of natural disasters. The plans based on the more efficient use of resources existing locally should address all types of natural risks present. More emphasis should be placed on the process of interinstitutional dialogue rather than on the document itself: plans that are not familiar to the participants are of no use;

(vi) Medical and other health-related academic institutions or professional schools should provide formal training to the personnel responsible for first response after natural disasters. This academic education will be periodically completed by on-the-job training;

(c) Ready access to global, regional, national and local warning systems and broad dissemination of warnings;

(i) For each type of disaster threat, countries should establish or have access to a warning system to predict or monitor threatening phenomena and disseminate the warning and appropriate information to the population and local authorities. As the objective of the system is to stimulate action to avert or reduce the impact, education of the recipients of this information should be given special attention;

(ii) All children in vulnerable risk areas should receive classes on safety and preparedness measures locally applicable.

42. If substantial progress is achieved towards reaching these ideal targets, the short-term reduction and loss of lives and damages should be significant. In addition, there should potentially be considerable long-term economic benefits that can be directed to more productive activities. Sustainable development, therefore, requires investment in disaster-proofing. However, precise quantified measurement of the short- and long-term benefits resulting from this investment would require additional studies using a standardized methodology yet to be developed.

B. Framework for technical activities

43. The following seven functions or strategies were adopted by the Committee as the basic framework for the overall programme plan.

(a) Identification of hazard zones and hazard assessment

This will entail scientific studies of the potentially destructive natural phenomena to which the country is exposed and will usually be undertaken by academic or governmental scientific institutions. To this end, the collection of important data will be enhanced, as generally the main hazards facing a given country or region are already known.

(b) Vulnerability and risk assessment, cost/benefit analysis

This will depend on the level of preparedness of the country against natural disasters, the hazard resistance of the man-made structures and systems, the experience of the communities with previous occurrence and additional risks. Vulnerability of various elements exposed to hazards should be assessed first. The combination of hazard and vulnerability information provides estimates of expected losses, i.e., risk, which will be used for cost/benefit studies of risk-reduction measures.

(c) Awareness at level of decision and policy makers

This is a key factor in the launching of disaster-reduction measures at local, national and regional levels and will not only depend on the threats of natural hazards and the vulnerability of the communities at risk, but also on the cost/benefit rates of the pre-disaster interventions as compared with the post-disaster relief measures. In fact, the perceptions of the actual risk caused by natural hazards needs to be proportional to the scientific assessment of the vulnerability level of exposed communities. To this end, the national committees will play a special role.

(d) Monitoring, predicting and warning

Monitoring and prediction involve the installation or augmentation of observational networks and will in most cases be undertaken by the same institutions as those concerned with hazard zoning and assessment, such as meteorological, hydrological and seismological agencies. However, the conception and issuance of warnings should necessarily involve the official agencies concerned with the response to warnings (e.g., civil defence agencies). The interface between these groups involves translating scientific terminology into language that can be readily understood by the authorities that have the responsibility for making complex decisions such as evacuation orders and the public. This linkage has been identified as one that requires increased attention.

(e) Long-term preventive measures

This category includes all the long-term or permanent measures that may be taken to reduce the vulnerability of the population and of

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structures (housing, industrial plants, urban lifelines, etc.). These may be divided between:

(i) Non-structural measures - Local and national legislation and planning, including land-use planning, is required to provide a sound basis for all other preventive measures.

(ii) Structural measures - These measures include major civil works constructed in most instances by local or national governmental authorities and the application of appropriate building codes and techniques (e.g., earthquake and wind-resistant construction) to be applied in the corresponding hazard zones.

(f) Short-term protective measures and preparedness

In response to the existence of a known hazard and especially in response to predictions or warnings of impending events, much can be done by short-term or temporary protective actions to reduce the vulnerability of people and property.

(g) Early intervention measures

Early intervention in a coordinated, interorganizational effort to modify, alter, suppress or mitigate the damaging effects of natural hazards.

44. Many, perhaps all, of the foregoing seven functions require the support of the following associated activities if they are to be truly effective in reducing the loss of life and damage caused by natural disasters: education and training of local and national specialists; public education and information; transfer of appropriate technology; application of proven technology; and research to develop new technologies and devise new policies.

45. It is also clear that the seven basic functions, with their supporting activities, will be applied, as appropriate, at the local, national, regional and global levels.

46. Thus, in a sense, the framework programme for the Decade involves a three-dimensional matrix, where each functional activity also includes various supporting activities, and where these combined activities may be applied at local to global levels.

47. The functional categories described above provide a framework for organizing projects and activities of the Decade participants. The current and proposed Decade-related activities of the United Nations agencies and non-governmental organizations will be presented in such a structure, and agency responsibilities will be identified. The framework could also be used at the national level, by national committees, focal points or other entities as a basis for organizing their activities. Use of the programme framework by all Decade participants will greatly facilitate presentation and evaluation of programme activities.

C. Criteria for project identification

48. A broad range of activities, including both scientific and technical activities, fall under the auspices of the Decade; however, in order to maintain a focus to the programme, it is essential that clear criteria be established for the projects that are formally endorsed and/or supported in the overall programmes.

49. The first level of consideration for proposed Decade activities is, naturally, whether they address the objective and goals in reducing the impact of disasters. The second level is whether the proposed activities contribute to achieving the specific targets adopted for the Decade.

50. In addition, at the third level, the activities should have as many of the following characteristics as possible:

(a) Should be easily integrated into existing programmes of a country, a National Committee or another international agency, and/or to foster the creation of a national programme for the IDNDR;

(b) Should produce rapidly demonstrable results in the field of scientific knowledge and engineering, allowing the implementation of loss-reduction measures and techniques that could be applied in other countries or regions with respect to other types of natural disaster;

(c) Should assure and accelerate the transfer of technology, increase the capacity for self-reliance of professionals in countries or regions in conducting scientific investigations and foster applications of mitigation techniques;

(d) Should promote and develop prevention and preparedness programmes in the frame of an integrated approach to disaster mitigation.

51. Because the Decade depends on the cooperation of participants for its success, these participants must be convinced that the programme offers an opportunity to make tangible progress towards reducing disaster losses. The best way to convince is to demonstrate that a project can achieve the desired results. Hence, some early positive results for the Decade will be absolutely essential for increasing support and momentum.

D. Projects

52. Projects that fall within the programme framework, that contribute towards the targets and that meet the criteria will be adopted as Decade projects. The Decade secretariat will maintain a register of all such projects that come to its attention. The register will reflect the scope of activities conducted at both the national and international levels in fulfilling the objective and goals of the Decade. The functions or strategies of the programme framework will serve as the basis for classifying projects.

It is anticipated that these projects will be undertaken by national committees and organizations, United Nations agencies, non-governmental organizations, etc.

(a) International demonstration projects

53. Certain projects that exemplify Decade goals and objectives undertaken by organizations of the United Nations system and international scientific and engineering organizations were identified by the Committee as demonstration projects. Projects on some important topics, especially drought and low-cost technologies, were not available to the Committee for identification, so significant projects in these and other fields should be added. Projects also can be identified as demonstration projects by national committees or regional organizations.

54. A list of the international demonstration projects that have been identified by the Committee follows. Funding for some of these projects has been made available by sponsoring institutions, but for others it will have to be sought by their proponents, perhaps assisted by the Committee recognition.

(a) Tropical cyclones

(i) Tropical Cyclone Disasters - International Council of Scientific Unions (ICSU)/World Meteorological Organization (WMO)

This project is intended to lead to a major improvement in the quality of hazard prediction associated with tropical cyclones. It is concerned with data acquisition and research on modelling. It is based on cooperation between WMO and ICSU and can also embrace national research programmes of a related nature. Future plans include scientific meetings in Beijing (October 1992) and the Caribbean (1993).

(ii) Tropical Cyclone Warning System for the South-West Indian Ocean Region - WMO

The project is concerned with methods for data acquisition and investigation of mechanisms of tropical cyclone genesis, evolution and motion. Future plans included a symposium in Beijing in October 1992 and the workshop in the Caribbean in 1993.

(b) Volcano hazards

(i) Reducing Volcanic Disasters in the 1990s - ICSU

The project includes the provision of risk mapping, basic monitoring instrumentation, emergency response plans and hazard awareness programmes for several volcanoes in developing countries. Its potential in reducing fatalities from volcanic activities was clearly demonstrated at the occasion of the eruption of Mt. Pinatubo, Philippines, where about 80,000 persons were evacuated just before the devastating eruption of 15 June 1991.

(ii) International Mobile Early-Warning System for Volcanic Eruptions - United Nations Educational, Scientific and Cultural Organization (UNESCO)

The objective is to promote further mobile scientific interventions concerning volcanic crises. Some activities towards the establishment of the system are regularly being implemented by UNESCO, generally jointly with WOVO (World Organization of Volcano Observatories). A feasibility study for the system was funded by UNEP.

(c) Earthquake hazards

(i) Earthquake Hazards - ICSU

The ILP (International Lithosphere Program) project, for global seismic hazard assessment will serve as a solid foundation on which local earth scientists will be able to build reliable earthquake risk assessment for each country. It is also of fundamental importance to earth science. Gaps in the availability of information needed are being filled. The world stress map has been completed and the overall project should finish in 1996.

(ii) Earthquake Hazard Disaster Management in the Mediterranean Region (SEISMED) - United Nations Disaster Relief Organization (UNDRO)

In the cooperative project for seismic-risk reduction in the Mediterranean region (16 countries), the first phase will be completed by the end of 1991, yielding technical reports on hazard, vulnerability and mitigation methods applied in the region. The second phase is planned for 1992-1996 and is aimed at pre-disaster management.

(iii) Minimizing Earthquake Vulnerability - International Association of Seismology and Physics of Earth's Interior (IASPEI)

This programme defines a five-year education and research plan for the international seismological community. Principal activities are: preparation of manuals (micro-zonation, hazard and risk assessment, management of prediction, post-earthquake surveys, strong-motion observations), estimation of seismic hazard in different regions, prediction of inter-occurrence times of large earthquakes and investigation of earthquake generation process.

(d) Information systems: (i) Disaster statistics; (ii) Disaster history database; (iii) Database network development; (iv) In-country disaster management information system - UNDRO

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These projects build on the existing United Nations International Emergency Network (UNIENET) and aim at creating an interactive electronic network for emergency management and disaster reduction. The system will assure technical means for fast and reliable communication within the disaster-management community, provide access to disaster-related information sources and develop and maintain a limited number of core databases, such as disaster statistics and a historical database. Countries at risk will be assisted to develop their own disaster-related, data-management systems, which can be integrated into the future global network.

(e) Education, research and training

(i) Disaster Management Training Programme - UNDP/UNDRO

The objectives are to improve disaster-management at the country level and to integrate preventive planning into the development process. Policy makers are being encouraged to assess gaps and priorities and to develop suitable programmes and projects.

(ii) Training Materials for Natural Disaster Reduction - UNESCO

The objective is to prepare modules related to training on natural disaster reductions. Its first phase (1991-1992) will focus on earthquakes and floods. Funds-in-trust for this have been received by UNESCO, from the Netherlands and from Denmark. A pre-study of the project is summarized in a strategy report entitled "Training for Disaster Reduction". Training texts are expected at the end of 1991.

(iii) "Roving Seminar" Educational Project: A Feasibility Study for a Pilot Experiment - Union of International Technical Associations (UITA)/World Federation of Engineering Organizations (WFEO)

This project includes a mobile demonstration unit, to meet people "where they live", and convince them that the advances in science and engineering are able to substantially reduce their vulnerability. Three regional projects are now being considered: the Caribbean, the Mediterranean and South East Asia.

(f) Risk assessment and preventive actions

(i) Comprehensive Risk Assessment - WMO

This project promotes a comprehensive approach to the assesment of risks associated with floods, severe storms and earthquakes. It will be initiated by WMO in 1992 in consultation with other international bodies concerned. WMO is providing limited funding, but full implementation will depend on the availability of external funding.

(ii) Design of Structures to Withstand Earthquakes and/or Extreme Winds - UITA/WFEO and Casualties versus Structural Damage - WHO/WFEO/UITA.

An engineering project to define and promote the improved design of structures to withstand earthquakes and/or extreme winds, particularly in developing countries, with very low cost and utilization of local materials.

(iii) System for Technology Exchange for Natural Disasters (STEND) - WMO

The purpose of the project is to identify and facilitate the transfer of technology for use in reducing the impact of natural disasters. Detailed plans for implementation are being drawn up in consultation with other intergovernmental and non-governmental organizations concerned. Once established, this technology-transfer system is expected to operate on a long-term basis.

(iv) Reconditioning of Existing Adobe Housing to Mitigate Earthquake Effects - Regional Centre of Seismology for South America (CERESIS)

Many millions of people throughout the developing world live in adobe housing, which is particularly vulnerable to earthquakes. The objective is to save lives by making sure they have time to escape before building collapse. Reliable, simple, low-cost technology will be developed and disseminated, for "do it yourself" application.

(g) Public health

(i) Strengthening of Health Sector Disaster Preparedness and Management in Indonesia - World Health Organization (WHO)

Preparatory activities have taken place to formulate a comprehensive disaster plan, train the health personnel and set up an information centre. The project document has been completed, approved by the national authorities and submitted to a potential donor.

(ii) Mapping Health Emergency Preparedness and Response in Africa - WHO

Initial steps for the production of community-based, health-risk maps in hazard-prone zones of Africa have been taken by the WHO Pan-African Disaster Preparedness Centre.

(iii) Improved Health Surveillance for more effective Disaster Response - WHO

This project aims to improve the knowledge of health risk and impact of natural disasters.

(iv) Disaster Mitigation in Hospital Facilities in Latin America - WHO

Four preparatory workshops have been held with engineering academic institutions in Brazil, Colombia, Mexico and Venezuela to introduce the topic of safe design of health infrastructure and improve the state of present general education in this field.

(h) International centres for research and training in mitigation of risks, for example, Morocco

An international centre in Morocco, for which a feasibility study would be needed, would collect, organize and interpret data, simulate and model hazards, assess risks and provide training activities.

The Committee notes a proposal from Italy for the establishment of an Emergency Management, Environmental Risk, Technology and Education Centre (EMERTEC) at Tecnopolis CSATA, Bari, based on the transfer of existing scientific and technological capacities in computing research and modelling of environmental hazards, to cover natural hazards as well. EMERTEC will contribute to the implementation of the Morocco international centre.

(i) The physical instability of mega-cities - International Agency of Engineering Geology (IAEG)/International Union of Geological Sciences (IUGS)

The project, submitted by the IAEG on behalf of IUGS and ICSU, concentrates on the physical environment and natural hazards management within urban planning in order to develop strategies for sound, safe and sustainable development. It proposes an integrated multi-disciplinary approach with other specialized organizations (International Union of Geodesy and Geophysics (IUGG), International Geographical Union (IGU), WFEO/UITA), and municipalities and international cooperation for application programmes in mega-cities of developing countries.

V. IMPLEMENTATION OF AN INFORMATION STRATEGY

A. Rationale

55. Significant advances have been made in various fields of science and engineering that can be utilized for the reduction and prevention of disasters. Nevertheless, many of the benefits of these findings remain unutilized due to shortcomings and lack of coordination in identification of sources of information and appropriate transmittal mechanisms.

56. While it is difficult to achieve adequate prior warning for some disasters, it is possible to make reasonable forecasts for most disasters. Nevertheless, thousands of people die either because warnings are not issued

or warnings are not sufficiently credible, particularly as perceived at the community level.

57. Most Governments in developing countries are beset with complex economic problems and competing needs that make priority setting and resource allocation extremely difficult. As a result, low priority is given to disaster prevention and reduction plans. Such compromises need not take place to a large extent if there is adequate coordination in planning and awareness of the importance of disaster prevention for sustainable economic development.

58. Immense resources are spent throughout the world for emergency relief assistance, rehabilitation and recovery programmes. The funding institutions that provide these resources need to be convinced about the cost-effectiveness of disaster prevention programmes, including those related to environmental protection.

B. Objectives

59. In order to address the above-stated needs, four objectives have been identified for the International Decade for Natural Disaster Reduction information strategy:

(a) To facilitate the collection and analysis of existing data and other disaster-related information;

(b) To promote the dissemination of data and knowledge related to disaster-reduction and information derived from data analysis;

(c) To publicize the Decade itself and its aims;

(d) To mobilize support for the Decade's programme.

C. Target audiences

60. To implement the above-stated objectives, target audiences have been identified for each strategy objective: disaster-vulnerable communities; governments in disaster-vulnerable and donor communities; planning agencies; policy-makers at different levels; scientific, technical and other professional groups; funding agencies; non-governmental and intergovernmental organizations; private foundations; disaster-management practitioners; and the media.

D. Methods for information exchange and dissemination

61. IDNDR Newsletter: "Stop disasters" is seen by the Committee as a powerful tool to provide broad coverage of Decade concerns at all levels; to maintain an essential and close link among all Decade partners; and to

effectively promote the Decade. The Newsletter is also a powerful channel of information exchange on new findings and progress of Decade-related issues. The Committee recognizes formally "Stop disasters" as the newsletter of the Decade. It was launched in 1991 and appears bimonthly in four languages. To attain the minimum target of 30,000 copies as foreseen by the Committee and to supplement the contribution of the Italian Government, through the Osservatorio Vesuviano, it is suggested that the newsletter be supported by other public as well as private partners.

62. International Day for Natural Disaster Reduction (second Wednesday of October): To take full advantage of this event, the Committee identified a theme and slogan for 1991, namely the interrelationships between disaster prevention, development and environment. Numerous national activities have been undertaken for the International Day in 1990 and 1991. These activities should be reviewed by the secretariat and shared with the national committees to help them plan future observance of the Day.

63. Media: The active involvement of the media is essential for the achievement of the Decade targets. They should be encouraged to oppose fatalism, raise public awareness on the benefits of integrating disaster-reduction planning in development processes, promote active involvement of communities and motivate policy-makers. In order to guarantee the steady flow of accurate information, national committees should include media experts among their members. Special attention should be paid by scientists, engineers and other participants in the Decade to publicize through the media all new and relevant findings on Decade-related issues. Scientists and planners should use post-disaster opportunities to highlight through the media the value of prevention/mitigation measures.

64. Other information channels and centres: The publication of press releases, brochures, newsletters, posters and notes for speakers on the Decade, and the organization of audio-visual programmes/productions, press briefings, exhibitions and poster, photo and drawing competitions are identified as useful and proven channels of information exchange to promote Decade goals. For maximum dissemination of information, it is essential to make full use of existing channels of communication, both of the United Nations system and of governmental and non-governmental organizations and the private sector. For example, the Department of Public Information of the Secretariat can publicize Decade activities through its publications, television and radio programmes and Information Centres. The coverage and capacity of the United Nations International Emergency Network (UNIENET) operated by UNDRO should be strengthened to provide easy access to information to all Decade partners, particularly national committees. Scientific, technical and other professional journals as well as specialized television and radio programmes can also profile the importance of natural disaster reduction. International conferences and annual International Days focusing on themes related to natural disasters, such as the 1992 United Nations Conference on Environment and Development, to be held in 1992, and World Environment Day, also offer opportunities to advance recognition of the need to incorporate natural disaster reduction in development and environmental protection plans.

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E. Supportive actions for information exchange and dissemination

65. Data collection and dissemination capacities should be strengthened at national and regional levels. The existing databases of the United Nations system, as well as of the scientific community, should be utilized for facilitating data collection and dissemination related to natural disaster reduction.

66. There is a clear need for a full-time public information officer in the secretariat with the following major functions: maintaining permanent contact with national committees; acting as a spokesperson for the Decade in relation to the press (he/she should build direct relationships with specialized and general information journalists and organize periodic seminars on Decade issues); establishing an inventory of information material and exhibits related to the Decade.

67. Regional institutions with the capacity to cooperate in the dissemination of Decade information should be identified and where necessary strengthened, for instance by providing information through copy-ready material from the Newsletter in the form of diskettes and film for regional adaptation, reproduction and dissemination.

68. It is expected that the members of the Special High-Level Council, as well as of the Scientific and Technical Committee, will take an active role in disseminating the Decade objectives. The participation of Committee members in conferences and roving seminars which concentrate on their areas of specialization will contribute to the Decade cause.

69. Participation in existing disaster management training programmes should be promoted to address as many trainees as possible during the Decade. Efforts should also be made to introduce Decade issues in existing training programmes of all practitioners. Disaster reduction issues need to be included in school curricula, and relevant educational materials should be produced.

VI. IMPLEMENTATION AT GLOBAL, REGIONAL, NATIONAL AND LOCAL LEVELS

70. The objective of the Decade is to reduce, through concerted national and international action, especially in developing countries, the loss of life, property damage and social and economic disruption caused by natural disasters. The principal goal is to improve the capacity of each country to mitigate the effects of natural disasters with special attention to assisting developing countries in the assessment of risks and in establishing early-warning systems and disaster-resistant structures when and where needed. Such improvement of capacity will also be of use in addressing disasters of an environmental and an industrial nature.

71. Implementing Decade activities will entail action and activities at the local, national, regional and global levels, and will involve all of the actors mentioned above - national committees, the private sector, professional associations, non-governmental organizations, academic and scientific associations and institutions, as well as international governmental organizations. While each entity may have its own independent activities, each action is part of a concerted effort to meet the objective and goals of the Decade.

A. National committees

72. The Specific Target Committee emphasizes the importance of national committees for the Decade, to bring about the cooperation of all parts of a national socio-economic system, including the relevant scientific and technological organizations and planning and economic development sectors, that can contribute to the national disaster-mitigation strategy. The national committees not only have the central role in stimulating national and local disaster-reduction activities, but also can contribute to regional and international undertakings. The key factor is to ensure that disaster reduction is incorporated as a permament element in the development planning process. If this is achieved by the year 2000, it will constitute a great success. An assembly of national committee representatives should be an integral element of the mid-term review of the Decade to take place in 1994, which is called for in General Assembly resolution 44/236; the Committee recommends a World Conference on Natural Disaster Reduction for this purpose.

73. The idea that disaster prevention is too costly for developing countries is without foundation. The Committee found of particular value the results of the Decade national committee survey conducted by WHO/PAHO in preparation for the meeting of Latin American countries that preceded the second session of the Committee. The survey underlined the following points:

(a) In disaster-vulnerable countries, a national system for disaster prevention and preparedness must be created. While most countries have already established committees, an effort is required to provide them with the needed capabilities to perform their functions in a systematic way, leading in the course of the Decade to the development of an autonomous national capacity for disaster mitigation.

(b) Ministries of planning must be included in National Committees, as well as ministries concerned with education and the media, in order to integrate disaster mitigation in the national planning process, achieve an interdisciplinary approach and inform the exposed population of the potential for disaster reduction.

(c) A budget for national committees is certainly needed, but the key to progress in disaster mitigation is to be found in evaluating and taking into account the disaster vulnerability of investments and other expenditures within the development process, which otherwise may lead to an increase of the potential damage of disasters.

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74. In view of the above, the Committee recommends that:

(a) National plans and priorities: Nations should take the potential occurrence of natural disasters into consideration in development policies and planning. Reducing disaster impacts should be included in development policies and plans taking into consideration the cost/benefit aspects of various mitigation measures;

(b) Composition of national committees: An inter-disciplinary and inter-agency involvement is essential, involving those responsible for disaster-reduction activities and socio-economic activities both in the public and private sectors;

(c) Role and functions of national committees: National committees should provide guidance to identify national priorities, formulate and implement disaster-mitigation and prevention plans, develop and monitor projects, initiate appropriate legal and regulatory measures through various legislative bodies, as well as provide information and advice to concerned Governments, public services and related organizations and to the general public and private sector as a whole. In addition, the national committee should assist in developing regional and global disaster-reduction plans, projects and training activities.

75. The Committee considered that the following would assist the national committees in their establishment:

(a) Information, including guidelines and case studies, for the setting up of national committees should be made available to countries considering their establishment;

(b) Designated focal points should be encouraged to promote the establishment of a national committee and should be supported through the provision of appropriate information and guidelines;

(c) Assistance should be provided, as needed, in the preparation of national (and regional) disaster prevention or mitigation plans, and legislation;

(d) United Nations Resident Coordinators and disaster-management teams should be used in establishing national committees. To this end, appropriate detailed advice and information should be provided;

(e) Communications with national committees should be strengthened. This could include dissemination of the IDNDR Newsletter, regional and interregional meetings, seminars, etc.;

(f) Maximum advantage should be taken of existing regional organizations and centres;

(g) Lists of persons and organizations interested in Decade activities should be drawn up and made available. An initial list could be drawn up based on information provided by members of the Committee;

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(h) Every effort should be made to convene sessions of the Commitee in developing regions. Such sessions would offer the possibility of convening regional meetings of representatives of national committees, as was done in Latin America;

(i) Members of the Committee should, as appropriate, represent Decade interests at conferences, occasions and events in their regions;

(j) The support of the press and the broadcast media should be encouraged and stimulated, and their role in early-warning systems should be emphasized;

(k) The international amateur radio community should be encouraged to take an interest in the activities of the Decade;

(l) National reports being drawn up for submission to the United Nations Conference on Environment and Development should reflect the relevance of disaster-reduction activities to both environmental management and economic development;

(m) Scientific and economic analyses of natural disasters should be encouraged and carried out.

B. United Nations system and other intergovernmental organizations

76. The annex to resolution 44/236, particularly paragraphs 5 to 10 thereof, specifies many ways whereby the United Nations system can contribute to achieving the objective and goals of the Decade. The recent activities of these organizations are described in the main body of this report (A/46/266-E/1991/106). Intergovernmental organizations outside the United Nations system have like contributions to make to Decade activities and their involvement should be solicited and encouraged.

77. Central to the implementation of the Decade objectives at the regional and national levels is political support for technical activities. As an example to that end, the member States of the Organization of American States (OAS), passed a resolution (CP/RES.564, 834/90) on the first International Day for Natural Disaster Reduction declaring OAS activities a contribution to the Decade and calling on member States to integrate natural hazard management and mitigation activities into socio-economic development. Since 1989, OAS has formally made natural hazard management an integral part of development planning technical assistance services. The Committee recognizes those regional intergovernmental organizations that have endorsed the Decade and made natural disaster management an integral part of its technical cooperation services to the countries, and encourages those other organizations to take similar actions.

C. Multilateral and bilateral development institutions

78. The Committee notes with interest the initiatives of the multilateral and bilateral development and financial institutions, especially the World Bank, UNDP and regional development banks, in disaster-related activities. These institutions have traditionally concentrated on responses following disasters and have expanded considerably the resources allocated to these activities. However, they are recognizing increasingly that a shift in resources towards prevention and disaster-mitigation activities is essential. The Committee welcomes this development and encourages its continuation and strengthening.

79. Apart from implementing physical disaster support, some of these institutions are extending assistance and training programmes focusing on disasater mitigation. For instance, the Committee notes the extensive efforts of the World Bank and regional development banks, as well as regional bodies (OAS, European Council, etc.), in serving as resource centres for its constituency by extending regional technical assistance on disaster-mitigation concerns.

80. The Committee appeals to the multilateral and bilateral institutions to expand their respective efforts in the field of disaster mitigation during the Decade. The Committee is convinced that such action, implemented in close cooperation with the developing countries, would make an important contribution to fostering sustainable growth in developing countries that now suffer great economic losses and social disruption from recurrent disasters.

D. International non-governmental organizations

81. There are a number of international non-governmental organizations, such as the League of Red Cross and Red Crescent Socieites, that have not only the interest but also the experience to contribute to and participate in Decade activities.

82. Similarly, several scientific associations, such as the ICSU, and WFEO/UITA, as well as numerous academic scientific institutions or societies, including universities, are in a position to contribute their considerable knowledge and research facilities to relevant Decade activities.

83. The Committee considered in particular that:

(a) Non-governmental aid organizations should be encouraged to participate actively to achieve goals of the Decade. Their efforts at community, national, regional and international levels is essential.

(b) Scientific and academic associations, including those in sociology and psychology, should be encouraged to develop activities and suitable research projects in areas relevant to the objectives and goals of the Decade.

E. Private sector, including insurance and financial institutions, industry and the media

84. Resolution 44/236 encourages private sector involvement in Decade activities, and certainly the motivation exists whether it be professional or commercial. Insurance companies, for example, have a vested interest, since it is they who pay for much of the damage caused by natural disasters. They also have access to considerable historical and statistical data. The construction industry is constantly improving its technology, practices and materials, and their assistance in disaster mitigation is essential. Space technologies can assist in the early identification and warning of potential disaster situations, and have much to contribute to prevention and mitigation measures. Capital investment in disaster prevention and mitigation projects is of interest to the banking and financial institutions. Indeed, there are few sectors that cannot find some relevance to Decade interests and activities.

85. The interest of the media is different in nature: it has a key role to play, whether it be in fostering public awareness or involvement in disaster warning activities.

86. It is desirable therefore that the private sector be fully integrated in Decade activities, perhaps through contacts with national committees or through participation in Decade projects.

APPENDIX I

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APPENDIX II

National programmes and projects

The annex to General Assembly resolution 44/236, which established the International Framework of Action for the International Decade for National Disaster Reduction, states that the Specific Target Committee should develop overall programmes for the Decade taking into account the priorities and gaps in technical knowledge identified at the national level, particularly by national committees. To assist in this process, the Decade secretariat sent letters to national committees and focal points where they had been designated, to UNDP Resident Representatives in countries where such a designation had not been made (with copies of the guidance provided to them in the 1 December 1990 letter from Mr. Joseph), and to the missions to the United Nations at Geneva. The letters requested that the information be provided in the context of the programme framework that was adopted by the Specific Target Committee. A brief summary of the nature of the responses follows.

Angola: Noted their focal point and called attention to provincial-level emergency committees. Cited drought problems.

Australia: "Australia's role in the IDNDR" has been published. Cited investigation of seismic hazards by a multidisciplinary team, development of better flood forecast and warning systems, and research on social factors.

Austria: Cited research programme under way on natural disasters in alpine regions, particularly landslides and crustal deformation associated with earthquakes.

Belgium: Noted their national committee membership.

Bhutan: Noted their focal point and submitted "Study of the causes and consequences of natural disasters and the protection and preservation of the environment" (118 pages), which cited need for improved coordination, databases, research, national expertise, infrastructure and facilities and legislation.

Bolivia: Named national committee and stated plan of work, including evaluation of zones of risk, publication of a national journal on natural disasters, and convening of a conference.

Botswana: Noted need for improved information sources and technical assistance. Will convene meeting on the Decade later.

Canada: Draft of "Toward a Canadian program for the IDNDR" has been received, which summarizes the resources and responsibilities for emergency preparedness and disaster management.

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China: New journal "Natural disaster reduction in China" received, which includes several papers describing the broad scope of the Decade programme. Has established a national integrated disasater management centre. Cited need for engineering works to control coastal erosion, floods from storm surges, and for a comprehensive disaster monitoring and warning system.

Czechoslovakia: Cited technology transfer for dealing with environmental risks of hydrometeorological and geologic origin, with application to flood and drought forecasting.

Denmark: Noted their low-risk status and willingness to assist other countries.

Dominican Republic: Cited focal point.

Ecuador: Submitted a five-page plan for risk evaluation; earthquake, volcano, and flood monitoring; and tsunami warning. Also addressed prevention and preparedness measures. Cited need for earthquake and volcanic risk mapping, with delimitation of safe areas for settlement development, an information and awareness campaign, strengthening and seismic and volcanic monitoring networks, preparation of earthquake building codes, and a training programme for local officials.

Egypt: Identified focal point and noted a disaster management conference, two training courses, and plans for a national committee.

Finland: Pointed out their donor and assistance perspective and provided report "Technology for natural disaster prevention available in Finland".

Germany: Published report "Organization and tasks of the German committee to the IDNDR".

Ghana: Noted establishment of national committee.

Indonesia: Undertaking a cross-sectoral survey. Cited improvement of national capacity for disaster mitigation and development of strategies and guidelines for wider application of existing knowledge. Also, need for risk-assessment survey.

Italy: Satellite-based environmental and natural disasters monitoring and control response system (PEACE Project).

Israel: Noted focal point.

Japan: Provided "Basic policy for promoting activities for IDNDR", "Disaster countermeasures in Japan", and "Concluding statement of IDNDR international conference 1990 Japan". Working on "White papers on disaster prevention 1991". Earlier, published "Challenges of the IDNDR", "IDNDR proposals by Japanese scientists", and many other plans by various ministries.

Kenya: Now formulating programme.

Luxembourg: Noted national committee.

Maldives: Named focal point.

Mali: Preparing a plan of emergency and rehabilitation actions, including forecasting, programme development and assessment. Needs early-warning system for drought and its effect on food.

Mozambique: Formed working group, which concluded that consultancy mission was needed to develop a plan to improve flood warnings, telecommunications, emergency plans, training and education and to reduce erosion, evaluate seismic risk and improve coordination.

Netherlands: Provided special compilation evaluating types of hazards, with details on windstorms, floods and blizzards and glazed frost. Also provided a description of "Netherlands storm surge service".

Panama: Named focal point and provided "Plan Nacional de Proteccion Civil".

Paraguay: Committee formed for coordination of actions for prevention and mitigation of disasters.

Philippines: Submitted comprehensive five-page list in the format of the programme framework, giving responsible organizations. Among many items noted were need for computer simulation of flood damage, studies of human response and environmental impact of disasters, vulnerability analysis, specialized training, and strengthening of communications, transportation, stockpiling, and many other activities.

Saudi Arabia: Named national committee, but noted lack of natural disasters.

Spain: Plan will be available by the end of 1991. Expect to establish seismic codes and flood plans.

Sweden: Noted lack of many natural hazards, except landslides.

Switzerland: Selected floods, landslides, avalanches, glacier movement, forest fires and earthquakes for attention. Sectoral groups are developing plans which will be sent later.

Thailand: Submitted a 12-page proposal "Study for draft national and regional disaster plans". Needs improvement of early-warning system for disasters.

Trinidad and Tobago: Cited specific needs for flood hazard maps, earthquake engineering assessments, computer system, weather monitoring, flood warnings and earthquake monitoring. Needs contour maps for flood hazard assessment, earthquake engineer to examine critical facilities, new weather radar, flood-warning system and national strategies.

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Turkey: Noted earlier publication "National plan of Turkey 1990-2000" and cited earthquakes, landslides and floods as having highest priority, and need for training in disaster preparedness and management. Needs earthquake hazard assessment and countermeasures. Among numerous activities, plans to upgrade seismic network, update earthquake-resistant building code, evaluate critical structures, and conduct public education programmes.

United States: Submitted list of priorities in the programme framework format identifying areas requiring attention. Reports published earlier on "Reducing disaster's toll" and "Confronting disasters". Draft federal plan is under preparation.

Vanuatu: Noted consultant's report on disaster management and listed main recommendations in programme framework format, including legislation, training, and specific engineering measures. Plans a comprehensive assessment of all potential disaster risks, an awareness campaign. Needs equipment for earthquake and volcano monitoring, cyclone shutters for government buildings, improved river drainage and training programmes.

Viet Nam: Submitted statement by national committee chairman and plan of operations involving monitoring, prevention and preparedness.

Western Samoa: Noted existence of national committee, also reported on responsible organizations in the Cook Islands, Niue and Tokelau. Need increased attention from policy makers to integrate disaster mitigation in national development programmes.

Yugoslavia: Identified four activities: earthquakes and landslides, atmospheric and river disturbances, wild fires and biological hazards. Will send further information later.

Zimbabwe: Submitted plan prepared with UNDRO assistance on "Strenghtening of the Civil Protection Service in Zimbabwe", which identified training and equipment requirements.
